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## ABSTRACT

World Education, with a small grant from the U.S. Agency for International Development, began an experimental pilot project in nonformal education at a university research center, a pilot project that eventually became the Government of Nepal's national literacy program. The program evolved gradually over 12 years (1977-89) and was molded in response to local conditions and the needs of learners, facilitators, government officials, and private development organizations. Gradually, a strategy for linking literacy training to development emerged. This strategy includes a series of learning materials that cover a broad range of development issues, a set of learning activities and training methods characterized by participatory learning, and a process of individual and collective growth that make literacy an appropriate starting point for self-help community development. The staff of the literacy program was always open to learning from experience as well as from experts. Many options were tried and various processes were used to modify and change the design of the program elements. The interplay between the ideal proposed by the staff and the real reaction from learners produced a very effective literacy program. (Examples of learning materials and lesson plans as well as discussion of the underlying theories are presented in this report.) (KC)

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## THE NEPAL NATIONAL LITERACY PROGRAM

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WORLD EDUCATION

68/54/89



# World Education

## Introduction

Attributing credit is very difficult, especially for an effort that has taken place over more than a decade and involved thousands of participants, instructors and program designers. The activities described in this monograph began in the early part of 1978. The first Project Advisor from World Education was Peter von Mertens, and he worked at CERID with Dr. Prem Kasaju. In 1980, Mr. von Mertens was replaced by Dr. David Walker and later Dr. Kasaju was replaced by Dr. Gajendra Man Shrestha. Dr. Lyra Srinivasan was the World Education consultant who provided advice to the project. When the project moved over to the Ministry of Education, the Under Secretary of Adult Education was Dil Bahadur Shrestha and he has remained in that position. When the project first began, David Burquist was the Project Manager based at World Education's office in the United States, and he was followed in that position by Mr. Thomas Drahman in 1979. In 1984, Dr. John Comings became the Project Manager. In 1986, David Walker left the project and Mr. Keshab Thapaliya ran the project until 1987 when Mr. Chij Shrestha became World Education's Asia Field Director and Project Advisor.

This chronology does not adequately reflect the effort of each person. Dr. David Walker is responsible for taking the ideas of consultants and input from the field and putting them into a quality package that included materials, instructional design and instructor training plan. Under Secretary Dil Bahadur Shrestha and Mr. Chij K. Shrestha were responsible for making this quality program work effectively within the context of Nepal.

This monograph was developed from drafts written by David Walker, John Comings and David Kahler.

World Education has also published a translation of the instructor's guide and the literacy primers, as well as some additional papers about the program. For more information, please contact:

John P. Comings  
Vice President  
World Education  
210 Lincoln Street  
Boston, MA 02111  
617-482-9485

Chij K. Shrestha  
Asia Field Director  
World Education  
GPO Box 937  
Kathmandu, Nepal  
977-1-416669

## CHAPTER ONE

### LITERACY AND NATIONAL DEVELOPMENT

"I have been sitting beside the road and breaking stones for the last ten years. I am hoping that being literate will bring a good change into my life."

- A learner in a Ministry  
of Education literacy class

World Education did not set out to create a literacy program with the Ministry of Education in Nepal. In fact, when the original project began in the late 1970s, adult literacy was looked upon by the development community as a dead issue. This monograph describes how World Education, with a small grant from USAID, began an experimental pilot project in non-formal education at a university research center, and how that pilot project eventually became the Government of Nepal's national literacy program.

The program evolved gradually over a period of twelve years (1977 to 1989) and was molded in response to local conditions and the needs of learners, facilitators, government officials and private development organizations. What emerged was a strategy for linking literacy training to development. This strategy includes a series of learning materials that cover a broad range of development issues, a set of learning activities and training methods characterized by participatory learning, and a process of individual and collective growth that make literacy an appropriate starting point for self-help community development. Although this is a Ministry of Education program, many government agencies and most NGOs working in Nepal now participate in this effort.

While many of the problems faced by the Ministry of Education and Culture (MOEC) and World Education were particular to Nepal and the solutions which evolved were responses to specific situations in that country, the decision points which the collaborating organizations faced are similar to those which planners will encounter in literacy programs in other countries.

In the Nepal program, the MOEC was always open to learning from experience as well as from experts. This monograph takes care to present the options that were tried and the processes that were used to modify and change the design of the program elements. The interplay between the ideal proposed by the staff and the real reaction from learners produced a very effective literacy program.



## WHY LITERACY?

The concept of development implies that progress and change are not only possible, but worthwhile. Both progress and change are part of the natural order of things, but what constitutes progress and what kinds of changes are beneficial are questions under continuous debate. Conceptions about the nature of development color, to a large extent, our attitude about the value of adult literacy. If the goal of development is merely the improvement of the physical conditions of life, then literacy may be of marginal importance, relevant only to the extent that it increases productivity. But if a more holistic view of development is taken, a view that extends beyond material considerations and encompasses the dignity of the individual and the empowerment of ordinary men and women, then literacy assumes a more important role.

This monograph takes a broad, humanistic view of development, one that focuses on processes as well as products. Improvements in the material conditions of life are among the most urgent development priorities, but opportunities for intellectual and personal growth are equally important. Broadly defined, development is a process which enables both individuals and societies to realize their full potential. It is this perspective that the authors of this monograph bring to their discussion of literacy. Literacy can be a key to empowering people by providing them with attitudes and critical thinking skills that help them deal with their problems and give them access to the kinds of information that they need to shape their future.

Even though World Education and the Ministry of Education believe in a broad definition of development, they also believe that literacy training can be supportive of a more narrow goal of increased productivity. The direct correlation between literacy levels and increases in productivity is difficult to prove, but there are comparative studies of large populations that point in this direction. Two examples of these studies are: Intersectoral Action for Health and Child Survival: Risks and the Road to Health. The context around which literacy materials are designed can focus on higher productivity. In addition, literacy skill levels and the basic education acquired in a literacy class can make programs that are focused on increases in productivity more effective and efficient.

### Literacy and Attitude Change

The role that literacy training can play in development depends, in large part, on assumptions made about human nature. In the Nepal Literacy Programme, the Ministry of Education and Culture and World Education took the position that real education implies not only the acquisition of skills and the sharpening of the intellect, but also the development of attitudes that support the development efforts of government and non-governmental agencies.

Education is one of society's most potent instruments for developing the individual. The human mind is the seat of knowledge and understanding, the source of creativity and invention, and the cause of progress in human affairs. Through our intellectual powers we are able to investigate the cause of a problem and weigh alternative courses of action -- to perceive the way things are and to envision how they might be. The Nepal program is based on building this critical skill of describing problems, analyzing their causes and exploring ways to solve them.

The motivation that attracts illiterate adults into their first educational experience is likely to be quite different from the actual consequences of participation. Some people join a literacy program with the expectation that it will lead to some form of economic gain. Often such expectations are unrealistic because the employment opportunities for new literates are few, especially in rural areas.

Once people become involved in an educational program, they begin to experience other kinds of benefits that they may not have considered. The most pronounced benefits are often of an affective nature. The participants begin to develop a more positive image of themselves and their role in society. They see themselves as individuals capable of change and able to contribute to the improvement of the lives of their families and communities. They realize that education is a process which can help them fulfill their own potential. Under the best of circumstances these perceptions of individual growth are real and eventually replace many of the original economic incentives, sustaining the learner through the long and arduous task of learning to read and write.

Literacy also brings with it some important personal skills that can help the individual cope with the everyday situations of life. One of the first benefits of a basic literacy program is the ability to sign one's name. Later, the ability to write letters provides a new source of pride and competence. People are able to read important documents for the first time. One of the many benefits of numeracy skills, learned along with literacy, is the ability to calculate change. People can shop with more confidence, knowing that they have a way to determine if they are being cheated. In many cases, the ability to read and calculate opens the possibility of starting up a small business or shop. Another consequence of basic literacy is access to religious writings. This can be both a compelling motivation to learn how to read and a source of great personal satisfaction.

### Literacy as a Step towards Intellectual Development

Studies have shown that schooling stimulates cognitive growth. Psychologists and researchers (Bruner, Vygotsky and Greenfield) have demonstrated that instruction leads to a very different kind of knowing than does experience. School instruction involves the use of language out of the context of action, which is very different from the ordinary use of language in real life situations. In oral cultures, language and thought are embedded in the context of real activity, whereas in school it is necessary to follow an argument solely on the basis of the abstract symbols of language. Instruction leads to mastery of the thought processes and to conscious control of formal language. Research among illiterate rural people appears to indicate that without the stimulus of schooling, abstract thinking fails to mature and cognitive development levels off in late childhood.

Like classroom instruction, written language is independent of any immediate referents. It involves following a story line out of the context of real events and comprehending a reality that lies beyond present experience. In oral cultures information is transmitted face to face, whereas written messages can be communicated independent of any physical relationship between the sender and the recipient. Such abstract uses of language requires the mastery of symbolic relationships and thereby "pushes" cognitive growth.

The studies which state that without the stimulation of formal education cognitive development levels off in late childhood do not prove that abstract ideas are beyond the comprehension of illiterate people. One cannot assume that illiterate people lack basic cognitive processes such as logical thinking and abstract reasoning. Such an assertion flies in the face of common sense. Rather, it is more likely that abstract concepts are understood at an intuitive level rather than a level of conscious control. An illiterate's understanding is of a practical and common sense sort, whereas symbolic mastery implies an ability to manipulate the thought processes in a conscious and comparative way.

Although reading and writing expose the learner to the symbolic language of abstract discourse, there is no evidence that literacy by itself will provide sufficient intellectual stimulus to develop the full potential of the mind. The effect of literacy by itself on cognitive development has yet to be determined. Still, there is no one arguing that learning to read does not push intellectual development in some degree toward symbolic mastery. Even basic literacy imposes many formidable new demands on the thinking of the learner.

There are a number of reasons why literacy by itself may not lead to the profound cognitive changes that have been identified with schooling. One is that literacy in itself is a narrowly defined technical skill, and mastery of this particular symbol system does not guarantee that the reader will engage in abstract thinking in a broader sense. Reading and writing are accomplished in school at about the same time as mastery of concrete

operations, so they cannot, in themselves, be considered as very high level skills. Logico-deductive reasoning, on the other hand, is not mastered until the early teens, if at all.

Though literacy may be one of the building blocks of formal operational thinking, it does not in itself appear to assure that such a stage of intellectual development will be reached. After all, basic literacy requires only a few months to master and does not provide the sustained intellectual challenge that may be required to release an individual's full intellectual potential. But literacy does provide an important foundation in the development of thinking skills.

The kinds of activities developed for the Nepal Literacy Programme go far beyond mere alphabetic literacy. Symbolic manipulation is extended to pictures and numbers. Many of the classroom activities invite analysis, comparison, generalization, and similar mental exercises that are essential to mastering symbols and gaining conscious control over the thought process. These activities add to the literacy skill acquired, but literacy is the central focus of the program. The people of Nepal live in a society that is becoming more dependent on literacy every day. No matter what the cognitive or affective effect upon a learner, the acquisition of literacy skill is a positive change.

#### Literacy as a Process of Empowerment

Literacy, conceived in its broadest sense, goes beyond the mere mastery of written symbols. As important a skill as alphabetic literacy may be, literacy should be viewed in a much wider context, as part of a range of skills aimed at enabling people to cope with a constantly changing environment.

Education is more than a minimal body of knowledge transferred from one generation to the next. Education can prepare people for the unknown and the unexpected. Education can also enhance people's capacity for reflection and creativity and sharpen their ability to envision a future that is different from their present. Education can heighten people's awareness of the problems that are hampering their fulfillment as individuals and communities, and create an awareness of the possibilities that lie within their grasp.

There are several ways in which literacy can empower individuals and communities. The most obvious of these is the access that literacy gives to new information. Knowledge becomes demystified as it becomes accessible. For example, one of the most popular publications in Nepal was the Nepali translation of the book Where There Is No Doctor. Suddenly, information that had been in the sole possession of a small group of professionals became generally available. The book is not a substitute for a doctor, but in a country such as Nepal where doctors are rarely available outside large cities, the information it contains can provide minimum health care and promote disease prevention.



Literacy has the potential of expanding people's horizons and allowing them vicarious experiences of other times and places. This greatly extends their potential range of learning sources and at the same time can lead to favorable attitudes about change. Reading about other people can foster empathy for them and put the reader in a new situation which may lead, in turn, to the creation of aspirations. The pursuit of those aspirations can lead to change in the reader's life.

Literacy also gives people the ability to regulate the flow of information and to retrieve information when it is needed. In the same way that the VCR has liberated people in the West from subservience to network scheduling, literacy gives people the choice to select what they want to know about and to decide when they want to spend time on it.

There are some who argue that mass literacy is a product of modern Western culture and that to impose it on traditional oral cultures destroys much of their unique character. But the alternative is less than attractive. Who has the right to take upon himself the responsibility of "protecting" oral cultures from the influences of the dominant literate world? It goes without saying that oral cultures in today's world, though rich in heritage, are poor in everything else. How can they defend themselves without the tools of education? Powerless to look after their own interests, they will become the wards of the very culture from which they are being protected. All cultures are in a state of transition, and oral cultures should receive the education they need so that they themselves can select and adapt those influences from the outside world that they feel are appropriate and useful.

Literacy is not only a source of individual empowerment; it is a source of collective empowerment as well. Literacy programs reach the poorest and most disadvantaged groups, people who have not been served by the formal education system. Such programs can offer people a forum for identifying felt needs, for analyzing problems, and for discussing issues of mutual concern. Educational activities can strengthen the channels of participation in community decision-making while raising aspirations and providing the impetus for constructive action.

But these outcomes depend to a large extent upon the design of the program. A one-on-one tutoring program often emphasizes technical competence in reading and writing. At the other extreme, a national literacy campaign may draw participants into broad economic and ideological priorities identified by government planners. A literacy program which has its focus at the community, neighborhood or interest-group level, however, can lead to participants making decisions and taking actions that have an impact on their lives and those of others in their immediate environment.

#### Literacy as a Strategy for Development

A moment's reflection on the problems confronting the world today is sufficient to indicate the enormity of the task that lies ahead in the field of social and economic development. Governments and international agencies divide these problems into sectors as a way to facilitate planning

and to focus resources, even though at the community level all of the problems are interrelated. For the most part, the focus of development has been on meeting material needs. The sectors that receive the lion's share of attention are agriculture, health, and the building of infrastructure to support industrial development.

Yet, in spite of four decades of international development assistance, many of the most critical issues have not been resolved. Paramount among these are the establishment of political justice and the equitable distribution of the world's wealth. Political and economic development efforts have hardly touched much of the world's poor. Whether looking at the disparity between rich and poor at the individual level or between the Northern and Southern hemispheres at the global level, the control of the world's resources and the extremes of wealth and poverty remain among the prime unresolved problems on the world's development agenda.

One of the reasons why development assistance has failed to trickle down to the poor is that planning and resource allocation has been done at the top. Until the poor have a greater voice in their own development, the economic resources flowing into the developing world will continue to be allocated first for the needs of the national, regional and local elites. To have an effective voice, the poor must be able to read and write as well as speak.

The dominant model of development throughout the 1950s and 1960s was borrowed from the success of the Marshall Plan in post-war Europe. In the 1960s and 1970s some variations on the economic model were introduced. More attention was given to the development of human resources: the skills, talents and capacities of a nation's potential labor force. Indicators of development were broadened to include such things as health, education and the physical environment. Integrated rural development, where the efforts of several sectors were concentrated and coordinated in specific geographic areas, became popular. But the transformation of stagnant, traditional villages into progressive rural economies is a goal that has only been partially achieved.

Indicators of development are still expressed almost exclusively in economic terms. Even education is seen primarily as an investment in a nation's productive capacity. Adult literacy, especially, is often justified in terms of its economic utility: a literate work force is more productive and will be more open to new opportunities; literate people are healthier and have smaller families; and it is easier to reach literate villagers with development messages.

At the same time, economic arguments have been used by governments and planners to accord adult literacy a low priority among development activities. Literacy is said to be time consuming since it takes many months of sustained effort for participants to reach a functional level of competence. There is always a problem of follow-up, without which the majority of the participants lapse back into illiteracy. Literacy is labor intensive and requires a trained and dedicated field staff, willing to work long hours in remote areas. The payoffs of literacy are indirect since reading and writing are only tools for learning. Their actual use must be



deferred until a functional level of competence is reached. Detractors even paint literacy as a token gesture to the poor, a consolation prize where real development in the form of dams, bridges, safe water or health clinics is not possible. Nothing, however, could be further from the truth. On the contrary, literacy efforts of the kind that foster self-realization and collective empowerment can be among the most effective strategies for grass-roots social and economic development.

Development projects are frequently forced on people without adequate consultation and on such a scale that they cause imbalances in the social and economic structure of the community. Time is not given for felt needs to be identified or for the organizational and decision-making capacity of a community to adapt. Rather than guiding the development process, the community is constantly reacting to events planned by outsiders or grappling with concepts and technologies that they poorly understand.

Yet without the stimulus of some intervention, traditional communities might not be motivated to take the necessary steps that lead them to development. Significant changes in outlook and behavior are less likely to occur if people are simply left to go on doing as they always have done. A major event, such as a revolution, might motivate communities to question their traditions and look for new solutions to their problems. But unless the problems that confront an individual or a community become the objects of reflection and analysis, they will never become learning experiences. They will remain problems.

A literacy program is one intervention that can nurture and speed up the process of grassroots development by providing a forum for reflecting upon issues and identifying needs. Through the interaction of many points of view, a discussion-oriented class can act as a catalyst for raising community awareness. Unlike more capital intensive forms of intervention, a literacy program will not raise unwarranted expectations about the availability of material assistance. For this reason, it lends itself particularly well to self-help forms of development. As literacy programs do not involve a large per capita cost, they are also less likely to foster dependence on outside resources. Another advantage is that, unlike the visit of an extension agent or a short training course, an extended program gives the participants time to grow, to reflect, to interact, and to discover their own strengths and capabilities.

This kind of approach takes a very different perspective on development from the one that is normally held by economic planners. It means looking at the question of development from a longer time perspective than the five years accorded to most development plans. It involves giving attention to such difficult-to-measure indicators as increased intellectual capacity, self-confidence and organizational ability. Governments and international development agencies are under pressure to produce tangible results quickly. They have to justify their programs to their funding sources. Unfortunately, the results achieved are often unbalanced and uneven: cultural norms are disrupted; traditional values are undermined by the pursuit of material enrichment; and the rich get richer while the poor

remain powerless and marginalized. A more modest approach, focusing on the development of local capacity, is likely to provide more immediate and tangible benefits to the poor.

A gradual educational approach gives people time to balance traditional values with the introduction of innovations. New ideas are accepted or rejected at the discretion of the learners, thereby putting control of the pace of change in the hands of the beneficiaries. Literacy programs are also more likely to reach the poorest and most disadvantaged groups because the elites, who often co-opt economic assistance to their own advantage, are not the clientele of basic literacy classes. The ultimate aim, of course, is to bring about a transformation in society -- to initiate a shift from a social order that is traditional, hierarchical and static to one that is progressive, equitable and dynamic. The method, however, is evolutionary rather than revolutionary.

At the same time, group learning contributes to a collective consciousness, a shared set of values and mutual respect. These are important steps on the path to collaborative action. Although some planners may express impatience at such a gradual and evolutionary approach, it is more likely to be feasible both politically and financially than ambitious crash programs.

Adult education can play an important role in breaking the cycle of poverty and powerlessness. The educational level of parents has a powerful influence on school attendance. If adults value education, that attitude will be communicated to children. Furthermore, a literate mother can help to prepare her children for school. One of the unique features of reading is that it uses language outside of the context of action. When parents read to their children, the children become exposed to the language of discourse and exposition. They learn to follow a story. They also learn the power of the written word to stimulate the imagination and to give joy. Children develop a love and appreciation of the written word that carries over into the school years. They have a source of motivation that does not exist for children whose first exposure to reading is memorizing letters in school.

To act as a catalyst for development, however, literacy needs to be linked to opportunities. If literacy is to act as a support to economic development, there must be opportunities for employment, training, and credit. For villagers to extend the level of their agricultural activities, they must have access to technical assistance, extension services, and supplies such as seed, fertilizer or improved breeding stock. If literacy is intended to assist people to enter the political process, then genuine avenues for participation and local decision-making must exist. If social development is a goal, there must be avenues for upward mobility, opportunities for women and minorities to participate, and a system of rewards based on effort and merit. If improved health is an objective, then the facilities to accommodate a new level of expectation must be provided. Health posts or other medical facilities need to be available with adequate staff and supplies. If literacy is seen as a human right, leading to a more just and equitable society, the community at large

must be willing to accept the new voices that will be raised and the community must be willing to accommodate the new pressures that will emerge for access to political and economic power.

### Nonformal Education and Literacy

A number of studies in the 1950s and 60s attempted to look at the connection between literacy and attitudes or behaviors that would predict receptivity to modernization. Positive correlations were shown to things such as susceptibility to innovation, achievement motivation and participation in media (listening to the radio and reading a newspaper). One sociologist, Lerner, suggested that literacy was "the basic personal skill underlying the whole modernization process." Cause and effect, however, could not be pinpointed. Was it literacy that made people susceptible to change? Or was literacy just one of the many skills that people predisposed to modern practices would pursue whenever opportunities and conditions might be favorable?

By the 1970s adult literacy workers began to recognize that there were social conditions in most Third World countries that tended to perpetuate illiteracy and which at the same time deprived the poor of meaningful opportunities for economic and political participation. Illiteracy came to be seen as both a result and a cause of underdevelopment. These social inequalities, it was felt, would have to be part of a country's adult education agenda in order for national development to take place. One school of thought began to experiment with Freire's principles of combining literacy with political consciousness raising. But this approach was too indirect for some analysts in the development community. They suggested that starting with literacy was putting the cart before the horse.

Much of the emphasis on functional literacy in the 1960s and 1970s was an effort to ensure that literacy training was linked to economic development. But it soon became apparent that knowing how to read and write the word "plough" was not going to help a farmer increase his production. In fact, a farmer would have to be able to read a great deal before his literacy skill would be able to make any significant contribution to his economic output. National development, it was argued, demanded that urgent attention be given to the most pressing economic problems, such as food production, the eradication of disease and the development of infrastructure. These tasks could not wait for the general attainment of functional levels of literacy. Furthermore, if literacy were simply an intermediate skill used to pursue more important goals, as many development planners suggested, the possibility of pursuing those goals directly ought to be given serious consideration. As a result, new and ingenious ways were sought to motivate and educate illiterate adults.

By the late 1960s a new approach to adult education in the developing world began to emerge under the name of nonformal education. Nonformal education encompassed a broad range of out-of-school learning activities, many of which had been going on for years. These included activities such as on-the-job training, youth clubs, extension services, and night classes. Development planners began to recognize the learning potential in this

diverse assortment of educational programs and started to systematically inventory and analyze them in an effort to broaden and strengthen their role in national development. Although adult literacy was one of the most widespread and longstanding forms of nonformal education, the general focus of this new approach favored hands-on demonstration of techniques that could be put to immediate use. In this way, traditional modes of communication, such as popular theater and puppetry and other more flexible educational activities, were brought into the work of national development.

Throughout the 1970s nonformal education was given widespread support by international funding agencies. Planners interested in economic development and educators looking for ways to empower the poor saw a means for intervening in traditional patterns of poverty in nonformal education. By the end of the 1970s the "development first" approach began to influence the thinking of organizations that had previously been working directly in the field of adult literacy. One of the reasons for the limited success of adult literacy programs, it was suggested, was that in societies organized around oral communication there was little motivation to become literate. Under such circumstances there was no urgency for acquiring reading and writing skills. The past failures of literacy programs, it was argued, were not the fault of program design, materials or methods; rather, they were due to the assumption made by planners that illiterate adults would place the same high priority on literacy that planners did. In addition, experience with functional literacy had shown that when reading and writing were mixed with vocational training, literacy skills would invariably lag behind practical skills learned through demonstration. Therefore, it was argued, literacy was not a practical requirement for learning so long as creative nonformal methods could be found to provide education for illiterates.

Nonformal education did not rule out the value of literacy training. In fact, adult literacy activities formed the backbone of many innovative nonformal education programs. But the general orientation of the movement saw literacy training as just one of a number of possible educational strategies.

By the end of the 1970s, adult literacy was receiving very little attention, and this lack of interest continued through the 1980s. At the end of the 1980s, however, industrialized countries were becoming aware of illiteracy among their own population. This and UNESCO's declaration of 1990 as the International Literacy Year brought attention again to this problem.

Now, a balanced approach is emerging, one which sees literacy as an important piece of the foundation on which skill training programs can be built. Some recent reviews of research on the link between literacy and other development indicators, specifically health, show that the effort



made to teach literacy skills has a positive effect<sup>11</sup>. Thus, when literacy skill levels are improved in an educational program that is integrated with other development efforts, both will benefit, and the resources spent on literacy will be returned through increased efficiency of the program.

### Literacy Strategies

There are a number of strategies for delivering and teaching adult literacy. Each approach has its own particular strengths. Although basic literacy may be the common denominator, the approaches are not simply different paths to the same destination. The assumptions underlying different approaches have implications for both program strategy and content. Although each literacy program is unique and is molded in response to particular social, cultural, economic and political circumstances, there are three broad designs that can be distinguished.

On one end of the spectrum are the programs where literacy is viewed in its narrowest sense, as a personal technical skill. If competence in reading and writing is the goal, then one-on-one teaching, in which a tutor works directly with a student at a time convenient to both, may be the most effective method. Each learner receives individual attention and works at his or her own speed. Programs of this kind are often well suited to private organizations and in most cases rely upon volunteer tutors. They appear to be most effective when learner motivation is high and the environment is supportive.

At the other end of the spectrum are the national literacy campaigns, which usually have the objective of mobilizing an entire nation and carry the full force of government policy behind them. Here, literacy is conceived of in its widest sense, as a means for restructuring society. Campaigns often have the additional objectives of giving legitimacy to new governments and of socializing people into a new political order. Although the goals of national campaigns appear to be much more far-reaching than those usually espoused by private humanitarian organizations, the differences may be more in scale and intent than in methodology. For example, the Cuban campaign in the 1960s utilized one-on-one instruction, although in order to maximize resources the planners preferred a teacher-pupil ratio of one to two. On the other hand, the teacher-pupil ratio in the Nicaraguan Literacy Crusade ranged from 1:10 to 1:25.

Between these two extremes -- programs which teach literacy as a purely personal skill, and government-sponsored campaigns which mobilize the vast resources of a nation to institutionalize a new social and political order -- lie a great many literacy activities that are of an

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<sup>11</sup>For example, Child Survival: Risks and the Road to Health, 1987; "Literacy and Health in Developing Countries", 1989; and Intersectoral Action for Health: The Role of Intersectoral Cooperation in National Strategies for Health for All, 1986.



intermediate scale. They may be government programs or private. They may be conducted on a nationwide basis or locally. Their goals often go beyond teaching people how to read and write but fall short of mass socialization or large scale social transformation. They are often linked to community development and typically include a broad range of social, economic and personal transformation objectives. Many of these programs are characterized by an increased emphasis on group and participatory learning. The Nepal National Literacy Programme is such an intermediate program.

### Outline of the Monograph

The remaining chapters of this monograph provide a detailed description of the Nepal Literacy Programme as it developed through collaborative efforts of the Ministry of Education and Culture and World Education. While the focus in the early chapters is on key issues in the development and implementation of intermediate scale literacy programs designed to promote community development, later chapters treat some of the issues related to the expansion of literacy programs to the national level. Readers are provided with a description of what worked as well as what did not in the belief that other practitioners can benefit from information about the effectiveness of various methods and techniques used in a specific cultural setting.

Chapter Two highlights World Education's initial work in developing and testing a nonformal education program in Nepal which was the precursor to the present literacy program. Many of the assumptions which guided the development of the nonformal education program and insights gained from that experience were incorporated into the Ministry's program.

Chapter Three discusses the basic design issues in preparing a literacy program -- how program goals have implications for methodology, and how political and institutional considerations affect the range of options available to planners.

Chapters Four, Five and Six present a detailed description of the methods and materials developed for the program. In Chapter Four the major themes included in the literacy materials are presented with reference to the set of keywords and discussion pictures which were designed to introduce each lesson. Chapter Five outlines the methods that were developed to introduce the reading and writing system, while Chapter Six describes the techniques used for teaching numeracy. Each chapter includes a description of the various tasks involved in designing the program, the choices that were considered and the solutions which were tried.

Chapter Seven outlines the evolution of the materials and methods used in training literacy program facilitators which turned out to be one of the program's most challenging and important tasks.

Chapter Eight reviews the implementation and evaluation strategies. Issues such as facilitator selection, motivation, supervision and accountability are discussed. This chapter discusses follow-up literacy activities and strategies for linking literacy to other development inputs. The evaluation of the program impact is also presented.

Chapter Nine details the expansion strategy which the Ministry of Education and Culture has proposed for the period from 1989 to 2000 as it extends program benefits and coverage to 11,000,000 people. This final chapter also summarizes some of the practical as well as theoretical lessons which the Ministry of Education and Culture and World Education learned in the development and evolution of the Nepal Literacy Programme.

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## CHAPTER TWO

### NONFORMAL EDUCATION FOR RURAL DEVELOPMENT

"It doesn't feel good to live in a village where I am one of the few people who can read. That's why I am teaching this class."

- A young teacher in a Ministry  
of Education literacy class

The original two-year pilot project implemented by World Education was entitled "Nonformal Education to Promote Rural Development in Nepal." World Education assisted the Government of Nepal in developing and testing 120 hours of nonformal education activities and materials that formed the basis of a six-month adult education program. The project was implemented with CERID (the Center for Educational Research, Innovation and Development), a research center of the national university, on behalf of the Ministry of Education and Culture and focused on the poorest sectors of society -- subsistence farmers, landless peasants, and ethnic minorities. An expectation of the project was that the methods and materials which were developed would be used by the Ministry either to strengthen its existing functional literacy program or as the basis for initiating new program activities.

A range of development issues were integrated into the curriculum. These included health, sanitation, water supply, agriculture and environmental protection. The main challenge of the project was to develop a participatory educational process that would engage learning groups and communities in identifying needs and mobilizing local resources to sustain development. In addition to providing information, the program was designed to help participants develop problem-solving skills, self-confidence and a realization of their potential both as individuals and as members of a community. Program activities were meant to contribute to individual growth, community action and ultimately to national development.

#### The Educational Climate in Nepal

In 1977, when World Education and His Majesty's Government of Nepal received a grant from the United States Agency for International Development (USAID) to carry out this experimental nonformal education pilot project, there were few organized adult education activities going on in the country. Nepal was the recipient of a large amount of development assistance in other areas from a number of multilateral agencies (UNICEF, UNDP, UNESCO, FAO and the World Bank) as well as from several individual nations. Considerable attention was focused at the time on an integrated



development approach where each donor agency took on a particular region of the country and concentrated its financial and technical assistance in helping further develop the infrastructure, agriculture and economy of that area.

All of these development projects paid some attention to the formal education system, and universal primary schooling was the main goal of educational development in the country. At the time, the Ministry of Education and Culture was in the middle of a ten-year experiment with a new National Education System Plan which reduced primary education from five years to three, postponed the introduction of English language teaching until the lower secondary level, and sought to balance academic subjects with vocational training. The new plan was designed to counter the elitist bias of the traditional school system, which was based on the English system in India, and to establish a mandatory national curriculum that would link education more closely to Nepal's development priorities. This new plan was meant to make education more relevant for the 94% of the population living in rural areas.

As for adult education, the government had supported adult literacy classes for nearly 25 years with limited success. The adult education programs of the Ministry of Education and Culture were implemented through its District Education Offices. The adult education program had no permanent technical personnel, insufficient funds, and little field support. An unpublished evaluation of the Ministry's Functional Literacy Programme, carried out in the late 1970s by a team from Tribhuvan University, found it to be ineffective. As a result of the conditions cited in the report, adult education and literacy programs had little impact over 25 years and, therefore, policy makers and educational planners gave little attention to this sector.

Although the Ministry of Education and Culture was the implementing body for World Education's nonformal education pilot project, the Minister of Education felt that a smaller organization would offer a more supportive climate for an experimental program. The National Education Committee, the policy making body which had been responsible for formulating the National Education System Plan, had established a research unit in 1976 to evaluate the plan's effectiveness and to carry out action research in education. This unit, CERID, was asked by the Ministry to take on the project and be the collaborating organization to work with World Education. This assistance included a resident advisor and financial support in the form of an Operational Program Grant (OPG) from USAID.

#### Getting Started: The Project Staff

The materials and methods that were developed during the two-year pilot phase of the project and the lessons learned during this period formed the basis for much of the literacy program that eventually took shape. The Nepalese staff included a project coordinator, an evaluation specialist, four field supervisors and an artist. The four supervisors were all recent college graduates. With the exception of the evaluation specialist, the staff had limited field experience. All of the project staff had participated in the National Development Service. As part of the National Education System Plan, every university student going beyond a

bachelor's degree was required to spend nine months in a rural area of the country carrying a development oriented activity in the National Development Service. This nine months of service gave the staff an understanding of rural life and the problems of development that most college graduates lacked, and this understanding was a valuable asset to the project.

None of the staff had any previous exposure to the theories or techniques of nonformal education. The staff's lack of knowledge and preconceptions about nonformal education turned out to be one of the strengths of the project and had important consequences for the way in which the program evolved. It meant that a trial and error approach could be adopted and that the staff's primary training experience would be through their work in the field.

Since nonformal education was an unfamiliar concept to the project staff, one of the first activities in the spring of 1978 was a study tour to visit nonformal education programs in Thailand and Bangladesh. The study tour provided Nepalese project staff with an opportunity to see and experience nonformal education activities first hand. At the same time, several project "ideas" were gathered from the programs observed in the two countries. These ideas had an important influence on the methods and materials developed for use in the experimental program in Nepal.

The second early activity consisted of a series of field visits to rural areas of Nepal where the staff spent from one week to a month gaining firsthand experience in needs assessment, materials preparation and the conduct of discussions with groups of village adults. With this brief preparation and input from World Education consultants, the staff began to put together a series of draft nonformal education activities on topics that had been identified during the needs assessment exercises.

#### Objectives of the Initial Curriculum

Staff looked for approaches that would make the nonformal education program both action-oriented and responsive to the interests and problems of the participants. The project goal was to have the learning groups focus on raising awareness about local problems, analyzing underlying causes of those problems, identifying possible solutions for the problems and discussing plans for community action to solve the problems. Plans leading to self-help solutions would, of necessity, be simple and in most cases would not depend upon outside financial or technical assistance. As experimentation got underway on materials and activities in the field, staff began to find out to what extent their expectations were realistic or not.

The initial objectives of the program provided the starting point for the design of the learning activities and materials. The objectives fell into three broad categories.

1. Social Objectives:

- o to increase awareness and understanding of how health, hygiene, sanitation, nutrition, family planning and child care affect the quality of family life;
- o to increase participants' capacity to make plans and to take actions to solve their problems at the individual, family and community level;
- o to increase cooperation and participation in community development efforts;
- o to encourage participants to identify and utilize available resources for community development;
- o to promote self-confidence among participants; and
- o to encourage more active participation of women in community decisions.

2. Educational Objectives:

- o to expose participants to basic literacy skills and give them a fundamental grasp of the writing system;
- o to increase interest in education for the entire family; and
- o to help participants learn where to go to access the resources and information needed to pursue interests or to carry out plans.

3. Vocational Objectives:

- o to foster the development of knowledge and skills with regard to agriculture and conservation, giving particular attention to vegetable gardening, composting, proper use of chemical fertilizers, grain storage, management of livestock and prevention of soil erosion;
- o to improve economic conditions in the community by establishing small-scale cottage industries, cooperatives, water supply systems for both drinking water and irrigation and by encouraging the cultivation of suitable cash crops; and
- o to help the participants identify and obtain technical and financial assistance for these activities.

Educational units were developed around specific topics related to the program's objectives. For example, under the objective of stimulating awareness of hygiene and environmental sanitation, activities were prepared on the importance of bathing, keeping flies off food, throwing household waste in a garbage pit, and building pit latrines. Each unit contained technical and explanatory information for the facilitator (the word "facilitator" was chosen over "teacher" or "instructor" because the educational program was to be one where learners were helped to discover their own learning). In each case a learning material was developed to introduce the topic -- a poster or series of pictures, a skit or dialogue, or the outline of a story which the facilitator could tell in his or her own words and embellish as necessary with local color. The topic would be represented in the material in the form of an issue that could be discussed from several points of view.

The purpose of the educational units was not so much to give information or technical understanding of a specific problem, since that was sometimes beyond the facilitators' abilities. Rather, the purpose was to bring the topic up for discussion so that group members could share experiences and knowledge of the issues. In each group there would be people who had different degrees of understanding about the problem. The resulting dialogue was seen as leading to increased awareness on the part of all concerned. Action to solve the problem was dependent on whether or not the group felt that something should or could be done about the issue. The task of the facilitator was to introduce the topic, to keep the discussion focused, to make sure everyone had a chance to speak, to see that the session was not dominated by a few talkative participants, to summarize the main points, and to help the group decide what might be done about the problem. At this time, teaching literacy skills was not part of the curriculum.

Typical of the kinds of materials that were developed were a series of pictures on the theme of community development. The first poster showed a poor, dirty and disorganized village with sick children and poor crops. A contrasting picture presented a clean, well-organized, healthy and prosperous village scene. Participants were asked to discuss the two pictures, to relate the problems shown in the pictures to the problems encountered in their own village, and to speculate on ways that a community could move from the first situation to the second. A follow-up series of pictures presented different government institutions that might have extension services in the district -- a health post, an agricultural extension agent, a veterinary hospital, a bank, or a school. The facilitator selected the appropriate institutions for the area and the participants discussed what they knew about each agency, what services the agencies offered, and what experiences they might have had with the agencies in the past. In this way, the materials served as a catalyst for the discussion of real problems and the formulation of plans for community action.



### Field Testing the Educational Materials

By the spring of 1979, a year after the start-up of the project, project staff were ready to test the first set of materials in a field situation. Four districts were selected as test sites, representing the three geographical regions of the country. These were:

- o one site in the Terai, the low-lying belt of plains in the southern part of Nepal. Though this has changed, most inhabitants of the Terai did not speak Nepali as their first language at that time.
- o two sites in the hills where the bulk of Nepal's population lives. The hills are dotted with villages where families are involved in subsistence agriculture. The hillsides are terraced and intensively cultivated and land holdings are small. Many families cannot produce enough food to support themselves for the entire year, and one or more members, therefore, must look for seasonal work as day laborers or migrate temporarily to towns or to India. The hill people are predominantly Hindu and speak the national language, Nepali. Historically they have exerted a dominant influence in the country both culturally and politically.
- o one site in the mountains, the most sparsely populated region of the country. The mountain people are, for the most part, Buddhist or shamanist. Most do not speak Nepali as their first language. They earn their livelihood by trading, farming and keeping livestock.

Twenty classes were opened: five in the Terai, five in the eastern hills, five in the western hills and five in the mountains. Each class had from 25 to 40 participants. The target group was illiterate men and women between the ages of 14 and 45, but there were often younger and older participants as well. Groups were expected to meet three to five times a week.

Two facilitators were hired to work with each group and received seven days of orientation and training by project staff. For the most part, school teachers were not selected as facilitators, the only exception being in one or two localities where there were no other literate people in the community. In one or two cases, illiterates who showed exceptional leadership qualities were selected, but worked with another facilitator who could read and write. In these first twenty communities, it proved impossible to find any women who could serve as facilitators.

Four project supervisors were each responsible for explaining the program to the government officials at the district headquarters, seeking their assistance in locating sites for the classes, selecting and training the facilitators, assisting the facilitators to mobilize adults to take



part in the program, and remaining in the district while classes were going on to observe the program and assist in its implementation. This was their own hands-on training in nonformal education. At the same time each supervisor was responsible for collecting basic evaluation data for a community profile and for conducting entry and exit interviews with the participants.

The intent was to give facilitators as much latitude and flexibility as possible to make discussions relevant to local conditions. Facilitators were expected to come up with their own combination of pictures and to adjust the presentation to make it appropriate for the class. They were to draw from their own experiences with examples to illustrate the points under discussion. In many cases, these expectations were unrealistic and beyond the capability of the facilitators. Facilitators tended to use the materials exactly as they were trained, no more and no less. When it came to creating new uses for the materials they were, for the most part, unable to do so.

Part of the problem resided in the training the facilitators had received. It was too short to draw out new insights about the nature of nonformal education or to instill new behaviors. Another obstacle was the educational backgrounds of the facilitators. Using classroom materials creatively to elicit opinions was outside of their experience. Most facilitators equated learning with rote memorization and were most comfortable when told specifically what to teach and how to teach it.

From these initial experiences project staff did learn that adults were ready to participate in the nonformal education program, that they would respond to the pictures and stories included in the materials, and that the learning groups were a useful forum for discussing community issues. Many of the learning groups decided to devote one evening a week to a cultural program, which included singing and dancing. It was evident that the social aspect of the classes -- coming together in the evenings to look at pictures, to be entertained with stories and to discuss community matters -- was an element that attracted people to the nonformal education program.

This first field test of the educational materials lasted four months. In September, 1979, World Education provided a consultant to work with the staff on improving the materials and the program design. The consultant's approach to nonformal education fit well with the direction the program was taking. She helped the staff clarify their goals, choose methods, and started them working on new materials. During the following months the staff revised many of the lessons, developed new ones, and prepared a simple, illustrated facilitator's guidebook.

#### Five Educational Methods

As part of the revision of the program design, the staff developed a methodology that was divided into five educational approaches: motivational, creative, analytical, planning and didactic. This section briefly describes each educational approach and the teaching/learning techniques that were used to implement them.

**Motivational.** Motivation was generally thought to be one of the major stumbling blocks in past adult education programs in Nepal. How do you interest people in attending a class at night when they are tired from a long day of hard physical work? Staff were often told that people would not participate. But these cautions were mainly voiced by people whose experience had been with traditional extension activities or with the Ministry's struggling functional literacy program. The project's solution to the motivation issue was to make the classes relaxing and fun. Earlier experience had shown that adults enjoyed the social atmosphere that the nonformal education classes offered. Staff reasoned that if they could provide a variety of educational materials and activities that were both stimulating and non-threatening, people would be attracted to the program. Many of the earlier stories used in the materials had been in the form of dialogues. A set of puppets were created for each class so that dialogues could be presented in an entertaining manner. This was done in hopes that participants would be inspired to create their own puppet skits.

**Creative.** Staff discovered that creative problem solving was something not usually encouraged by past educational programs in rural villages. Despite this, staff felt that the participants could look for creative solutions to problems if given a chance. A number of open-ended materials were developed so that the participants could tell their own stories or illustrate situations in their village that were important to them. One of these materials was flexiflans -- cardboard pictures of people, animals and objects with movable parts joined together with shoe eyelets. Backed with sandpaper, flexiflans could be fixed in various positions on a flannel board to create an original scene. Participants worked in small groups to depict a situation which they could present to the class and which could be used as a starting point for discussion.

Another material used to encourage creativity was a series of eighty pictures showing the same set of village characters in a variety of situations. Participants were given a random selection of fifteen or twenty of these from which they were to select four or five and arrange them in order to tell a story. Like flexiflans, these serialized pictures were designed for use in small groups and then presented to the class. Open-ended materials such as these made it possible for the participants to raise issues which concerned them but of which project planners might not be aware.

**Analytical.** Analysis is one of the important skills needed for effective problem-solving. In order to give the participants practice analyzing situations, the project used a series of open-ended posters which clearly presented problems commonly faced in villages. The posters were designed to stimulate discussion, awareness and critical thinking. In the discussion, participants were to identify the problem, think about its causes, reflect on its relevance to their own situation, and come to some decision about what could be done about it. In earlier field work, staff had found that discussion of pictures usually stopped when everything shown in the picture had been identified. Most of the participants were unaccustomed to looking at pictures in any form; most had never experienced pictures as problem-posing materials to be analyzed. It was not surprising, therefore, that they should see their task in fairly limited terms.

This problem was discussed with the World Education consultant who demonstrated a technique for assisting the facilitators to ask a variety of questions at different levels. By using the five fingers of the hand as a reminder, the facilitator could guide the group to analyze any kind of discussion material along five different lines. The technique could be used for posters, stories, puppet skits, and even situations presented by the participants themselves with flexiflans or serialized pictures. Each finger is associated with a different type of question: identification, analysis, experience, empathy and evaluation.

**Planning.** Planning is a process whereby a development goal is broken down into a sequence of specific steps or activities. It involves identifying resources needed to accomplish each step and distinguishing between resources that are locally available and those that require outside assistance. Planning materials were in the form of "before" and "after" pictures. After looking at the pictures, a group discussed alternative ways and intermediate steps to reach the after situation. Planning is a logical extension of analysis. It is an important skill in community development as it allows the community to focus its scarce resources on specific tasks that will bring them closer to realizing an agreed-upon goal.

**Didactic.** Didactic approaches were used to convey information and to teach technical skills. These have traditionally been the most widely used methods in adult education. They are most appropriate for people who have overcome their resistance to change and are willing to do something about the problem. They are not usually suitable for the purposes of motivating people or raising their awareness. For example, among the didactic materials developed for the project was a flip chart on how to build a pit latrine. The flip chart gave information on where to build the latrine in relation to a house and water sources, how to line the pit, how to make the floor and superstructure, and how to maintain it. But technical information such as this would hardly be relevant to people who see no need for pit latrines. Didactic materials are most appropriate when used in response to felt needs.

It was not the materials themselves which dictated whether they would be used for motivation, analysis, creativity, planning or instruction. A single poster, for example, could be used in any of these ways. What is important is where the ideas come from. When materials are used creatively, the ideas come from the participants. When used for instructional purposes, the ideas come from the facilitator. Using materials for instruction may involve asking questions and encouraging the participants to discuss the matter, but if there is really only one right answer, and the facilitator is trying to bring the group around to that point of view, the method is didactic. With analytical materials some ideas are described in the material itself, but it is open-ended enough to permit several points of view. The ideas come partly from the materials and partly from the participants. Planning materials combine aspects of both analysis and creativity. Motivation runs across all of the methods.

### From Nonformal Education to Literacy

By the winter of 1979, staff were ready to return to the same four districts with a six-month program. For the second field test, ten classes were run in each district. Staff looked for areas where women facilitators could be recruited, and about one third of the facilitators were women.

A number of important lessons were learned from the second field test of the materials. The field test confirmed the earlier finding that the nonformal education classes were popular with the participants. Classes were held six days a week, usually at night, and were well attended.

Many women joined the classes. The program was held during the winter season when there was little agricultural work, but women in the villages spent long hours during the day at household chores -- chores that continued right through washing up after the evening meal. Many of the women also had small children to look after, but they would simply bring their nursing babies along with them to the class. In the hill and mountain districts about 65% of the participants were women. The percentage was much lower in the Terai where more conservative customs prevail. Women in the Terai were much more restricted in their activities and in many communities mixed classes of men and women was considered inappropriate.

Another important finding was that the classes brought tangible changes to the community. One of the most striking changes, especially among the women, was their increased self-esteem and sense of self confidence -- a change that they were able to articulate themselves. When supervisory staff came for visits, the women would sometimes remark that they would have been too timid to speak to strangers before they had taken part in the classes. In one instance, a group of young women described how they had previously been afraid even to speak up in front of their husbands or their elder brothers but that now they felt comfortable doing so.

In a number of cases the participants organized community projects, such as repairing trails or improving traditional stone water taps. Two communities started small primary schools and raised their own money to hire local teachers. Their hope was that the government would recognize the school and eventually build a permanent structure and supply a trained teacher.

In almost all of the communities a few participants built pit latrines -- usually the first ones in the village. One problem was that many of the latrines were not built according to the design specified in the flip chart. The participants, not fully understanding the principles of sanitation, tended to take shortcuts. The main motivation in their minds was the privacy that latrines seemed to offer. On the other hand there were cases where latrines were properly made but remained reserved for visiting project staff. They were symbols of modernization rather than indicators of real change. In discussing why this was so, staff came to the conclusion that it was because the latrines had been forced on the participants before they agreed that they needed them. It was a good example of what can happen when one focuses on needs set by the project staff rather than on needs identified by the participants.



There was another kind of feedback from the field that had important consequences for the subsequent development of the literacy program. The project received consistent reports that the participants were enjoying the materials, were discussing issues of relevance, and were even carrying out simple activities. At the same time, participants wanted to know when the literacy part was going to begin. This feedback took project staff somewhat by surprise, as the assumption had been that villagers would not be particularly interested in literacy. It became evident, however, that according to the expectations of the participants, adult education included learning how to read and write, and so the project developed its first literacy materials.

The early literacy materials were extremely simple and designed only to acquaint the participants with the written language and to give them some simple skills, such as writing their names. Letters were introduced through words associated with the themes in the lessons. The original list of thirty words included such things as forest, fertilizer, clothing, hunger, house, medicine, knowledge and unity. The entire list covered all of the signs and symbols of the Devanagari script (used in Nepali). Individual syllables were printed on cards and backed with sandpaper so that the syllables making up a word could be arranged in different combinations on a flannel board to make a variety of words. Facilitators could be flexible about the way they introduced the keywords as there was no prescribed syllabus or literacy text. As it turned out, these few keywords had only served to whet the participants' appetites.

It was also toward the end of this six-month field test of the revised educational materials that the program was beginning to generate interest from Nepal's development community. The Ministry of Education and Culture itself was beginning to take a closer look at project activities, almost a year before the project was due to turn the nonformal education materials over for its consideration.

The program was at a crossroads. Staff realized that they would have to begin looking seriously at the practical considerations of replication on a larger scale. Part of the success of the program was due to its small size. The supervisors could visit the classes frequently and encourage the facilitators. Staff realized that the facilitators did not fully grasp the principles of consciousness raising, reflection and planning. Rather, they were simply doing what they were trained to do -- using the materials to generate discussion, to talk about problems in the community, and to plan activities.

Since the participants were asking for literacy, staff concluded that a literacy program could act as a framework for the nonformal education materials. Up to this point the project had avoided an emphasis on literacy, as the Ministry already had a program. By giving more emphasis to literacy, while at the same time retaining the best of the nonformal education activities developed so far, the project could give the program a focus that would put it in line with one of the established objectives of the Ministry of Education and Culture and increase the possibility of its being utilized on a wider basis.



### CHAPTER THREE

#### DESIGNING THE LITERACY PROGRAM

"When I heard about the adult education classes to be held for us old people, I was happy at first. But then on second thought, I said to myself, 'Me, study? At this old age when I am about to die? It's too late for me to learn anything. I'm too old for this sort of thing.' But my husband, who's the local school janitor, kept on pushing me, and finally when my friends also showed interest, I decided to join with them. Today, I'm very happy I did. I look forward to the night, to come to what I had never seen before, learning what I had never imagined, learning what I had never heard."

- A woman in a Save the Children literacy class

At the outset of the development of the literacy program, there was not a ready political constituency which was convinced that literacy would be an effective strategy for grassroots mobilization. Existing literacy programs, both public and private, had limited coverage, no sustainable infrastructure, and were underfunded. As a result they had only a modest impact on a problem which was enormous.

Since the project wanted to learn from the successes and failures of the past, an inventory was made of existing activities to see what could be learned. The inventory included close study of both public and private efforts in Nepal, as well as work being carried out in India. In each case, special attention was given to how literacy skills training was planned and introduced into ongoing development projects, which methods were used, and how materials were prepared.

The Ministry's existing Functional Literacy Programme introduced the letters based on the similarity of their shapes. Examples were given using words that contained other letters not yet learned. The approach relied heavily on rote learning with little reading practice until all of the letters had been introduced. The program was designed so that the first half was devoted to learning the writing system. During the second half the participants read a series of pamphlets on functional topics such as health and agriculture. Based on the the experience of the new nonformal education project, the approach appeared too technical. As the methodologies focused exclusively on reading and writing, project staff

were concerned that it would not promote discussion or raise awareness about community problems. A broader approach was seen as being more responsive to specific needs.

Another program which was studied was one run by the Swiss Association for Technical Assistance (SATA) which had developed a new literacy program for use in an area where it was building a road. SATA staff were experimenting with a key word approach, as World Education had done in other countries, where the letters of the script were introduced in the context of whole words. But unlike Freire's key words, which were chosen for being highly charged with emotional meaning, SATA used key words which were not politically "loaded." SATA also provided each participant with an elaborate wooden box with partitions and slats along with dozens of small syllable cards which the participants could arrange and rearrange to make different words. Although this box was found to be effective, it was deemed too expensive and too complicated for production and use in a large scale program. One interesting feature of the SATA program was the fact that the participants were encouraged to read a few simple sentences right away, using only the syllables they had learned.

In Darjeeling, a hill area in India which borders Nepal, project staff visited a program run through a Catholic institution, Hayden Hall, which used a consciousness-raising approach to teach Nepali. Some of the words, for example, were geared toward economic, political and social issues, such as Thagnu (to cheat), anyaay(a) (injustice), and agyanta (ignorance). Along with these were less political words such as kaam(a) (work), khetii (agriculture) and rukh(a) (tree).

The Hayden Hall program used two books. The first book introduced the script and provided practice using the syllables to form words and to read simple passages. The keywords were illustrated with line drawings. The second book contained reading passages on a variety of health issues such as nutrition, child care, vitamins and tuberculosis, and social problems such as gambling and alcoholism. Study questions were provided after each reading passage. The second book contained no illustrations. The Darjeeling program seemed consistent with the project's objectives: using literacy as a strategy for raising issues and encouraging community and individual awareness.

#### Clarifying Project Assumptions

From the outset the major objectives of the World Education/MOEC project were to provide a literacy program that introduced the writing system in a clear and logical manner, to provide extensive reading practice even as the repertoire of syllables was being built up, and to use material that was interesting and fun, appropriate for adults, and oriented toward community development. The program was to serve as a catalyst for development by exposing participants to new ideas and information and by giving them a vision of what was possible. In order to stimulate development, either at the individual or at the community level, the program would cause participants to examine their own practices and consider changing them.

Project staff thought that combining some of the nonformal education activities with literacy learning activities could provide this intervention. Participants would be exposed to new ideas and practices in a manner that would be under their own control. New ideas and information would challenge the participants to reflect on their current practices and stimulate discussion. The interaction of different points of view could create a climate of receptivity to change, and as the Director of CERID put it, "the program would make the villagers more development-prone."

There were several reasons why literacy classes could provide an appropriate setting for discussing community issues and making plans to solve community problems. Classes of fifteen to thirty adults, representing a cross section of the community, could lend themselves to effective community action. Development activities targeted at the level of the entire village might be too large and might be dominated by local leaders. Not everyone would have the opportunity to express an opinion or participate in an active manner. On the other hand, projects aimed at the family or the individual level might reinforce individualistic and competitive tendencies. From earlier field work project staff had seen how villagers were often reluctant to collaborate with people outside their family group and were distrustful of joint projects. Participants in the literacy program, however, could work together over a period of several months and the classes could provide an ideal environment for building individual and group confidence, developing local leadership, identifying problems, and making plans.

Furthermore, unlike many development activities which bring benefits primarily to the elite, literacy training was seen as reaching the underprivileged sectors of society. In fact, those who had never had an opportunity to be educated -- the poor, minorities, and women -- would be the direct beneficiaries of the program. Literacy could be a means for empowering such people and making them active and vocal participants in the development of their communities.

Over time, staff became increasingly modest and more realistic in their expectations. One of the important lessons that staff learned was to be patient and to recognize that change, no matter how slow, was an important indicator of progress. In retrospect it seems clear that had the program been confined to the two or three year period originally planned, very little that was worthwhile could have been accomplished.

#### Issues in the Design of Literacy Programs

In designing the literacy program, CERID and World Education staff were faced with several issues about which they needed to make decisions. Each of these issues is described in this section of the monograph.

**When is a Person Literate?** Definitions of literacy range from a minimal ability to read and write one's name to being able to read and write everything that one can speak and understand. Many definitions are tied to reading and writing at a specific grade level. In Nepal no national test for literacy existed and the ability to read and write one's name was taken as an indication that a person was literate. Even with such a limited definition of literacy, Nepal's 1980 Census estimated that 79.4% of the adult population, age 15 years and older, was illiterate (men at 68.3% and women at 90.8%).

Many definitions of an adequate minimum level of literacy arise from the needs of society and the nation. For example, economic planners are concerned with the creation of an educated work force that can contribute to increasing productivity and, as a result, specify levels of literacy that are commensurate with that objective. National campaigns often focus on socialization and nation building. In the emerging program in Nepal, staff focussed on the needs of the individual and the community. Literacy was seen as a skill to be used for learning, enjoyment and communication. The literacy skills taught in the program would have to be solid enough for the learner to be able to continue to learn, through individual effort, after the classes were finished. This meant that, in addition to introducing all the elements of the written language, the program would need to provide enough practice so that new literates would feel comfortable reading simple written material. The basic course would have to be more or less self sufficient, as one could not count on organized follow-up.

Although the project staff did not consciously attempt to equate the literacy level of the course to any school norms, the Adult Education Section of the Ministry eventually issued a statement to the effect that completion of the adult literacy course would be the equivalent of reading at a third grade level. This statement of equivalence, though arbitrary, had the effect of permitting participants from the literacy course to enter the formal school system at the lower secondary level. This was a useful strategy as it provided a tangible benefit to younger learners. It became less of a benefit, however, when primary schooling was increased from three years to five.

As in the case of many languages that are undergoing changes as a result of intellectual and linguistic pressures, there is a formal or literary level of Nepali that uses a wide range of vocabulary not common to the spoken idiom. Formal Nepali writing, as found in the national newspaper for example, uses a great many Sanskrit loanwords. A project objective was to enable the participants to read and write the same language that they spoke and understood, and the literary language was not introduced in the basic literacy course. Project staff realized that this would make it difficult for new readers to understand a great deal of the material that was available in print. A hoped for outcome of this strategy was a growing population of new literates that would encourage publishers to begin preparing easy-to-read literature at an appropriately simple level.



**One Language or Many?** There are some forty different languages and dialects spoken in Nepal. Many ethnic communities have only a rudimentary working knowledge of Nepali. A major issue for the project was how to address the needs of so many linguistic groups.

There are psychological advantages in learning to read and write in one's mother tongue. In the first place, the difficulties of learning the symbols of writing are not compounded by having to grapple with a new language at the same time. Furthermore, for minority groups, learning to read and write their mother tongue has the potential of reinforcing their culture, history, identity and feelings of self-worth. There are two or three cultural groups in Nepal, particularly the Newars and the Tharus, that were making conscious efforts to revitalize their cultural heritage by promoting literature in their own languages. Several other cultural groups living close to the Indian border spoke languages common to northern India, such as Maithili, Hindi and Bhojpuri. Although these people are Nepalese, their cultural, social, linguistic and economic ties to India are strong.

A single national language can be a binding force that contributes to building national unity within a rich cultural diversity. In addition, Nepal can not afford the costs of literacy programs and reading materials in all of its many languages. Language policies are usually decided on political and economic grounds rather than on cultural, psychological or pedagogical ones, and Nepal chose one language.

In the case of the new literacy program, the project opted to reinforce the government's policy to promote the national language. Nepali was being taught in all the schools, was the official language of the radio and the civil service, and was spoken by more Nepalis (well over 50%) than any other language.

Although project staff were not initially comfortable with the idea of teaching beginning literacy in a language that was not readily spoken by the participants, they found it to be less of a problem in practice than anticipated. In the first place, experience showed that those who participated in the literacy classes were usually eager to learn Nepali. They perceived the national language as a means of access to the world outside their own communities. Although struggling to read and write in the national language was undoubtedly a source of frustration and discouragement for some of the participants, a number of them remarked that learning to communicate better in Nepali was one of the skills they valued. In addition, since Nepali was heard all the time in the market, on radio, in school, and in government offices, most people had some knowledge of the language. More than half of the non-Nepali speakers spoke languages (such as Hindi, Maithili or Bhojpuri) that were closely related to the national language.

There were advantages to having a single language policy for the program planners as well, not the least of which had to do with cost. Although the program might have been more focused and perhaps more relevant to each community had it produced tailor-made materials for each ethnic and linguistic group, it would also have been much more expensive. The project with its small staff of writers and one artist had all it could handle to

produce one good set of materials. To have produced more would have taxed these limited resources beyond their capacity, and in the end, the extra effort might not have produced significantly better results.

**A Single Set of Materials or Variations?** In the beginning, staff had anticipated that they would produce a minimum of two and possibly three sets of learning materials, one for the hill population, another for the Terai and possibly a third for the mountains. These three regions of the country were viewed as being sufficiently different in culture and dress to require separate sets of illustrations and sufficiently unique in social and economic circumstances to merit their own problem-posing designs.

A decision was made to first concentrate on producing one complete set of materials aimed at the hill population. The hills are the middle ground between the mountains and the Terai, and the national language, Nepali, is the language of the hills. When the materials were tested with Terai participants, they were easily able to identify what was shown in the pictures and to discuss the issues although they were aware that the pictures showed hill people. To have produced regional variations of the materials at so early a stage would have been a luxury. Instead, staff learned to live within the existing limitations and to distinguish what was necessary from what would be nice to do. The single set of materials became the program design.

**Choosing the Content for the Materials?** The learning materials were designed to support social and economic development. Unlike most private organizations involved in Third World development, World Education did not have its own specific sector or geographic project area. The program's potential target population was the entire country. Therefore Nepal's national development priorities were examined to select topics to include in the learning materials. Staff tried to identify generic themes that would be useful to a broad spectrum of the population. In the basic literacy course, subject matter that would have the most widespread application was included. Issues that pertained to specific geographic, occupational or gender interests, were relegated to follow-up programs. What emerged from this process was a mix of social, economic, health and environmental themes.

Staff were aware that women comprised the largest segment of potential learners and that there was a need to integrate a positive role model for women throughout the learning materials. This was not difficult, as women, especially in the hills, play an active role in the social and economic life of the community. By keeping this objective in mind staff were able to use the literacy materials to show women having opinions, making decisions, learning new skills, and modeling a wide range of self-reliant behaviors.

Staff did not outline the entire set of materials at the start. The thematic content of the course, as opposed to the literacy content, evolved over the many months that it took to develop the lessons, and was revised many times after testing in the field. The early lessons contained little technical information, as the level of writing was limited by the number of letters that could be used. In the first few lessons it was the pictures

that presented the themes for class discussion and provided most of the content. Gradually, as the participants' literacy skills developed, the content was increasingly conveyed through the written materials. Whereas the first half of the course dealt with issues at a general level, the second half of the course introduced more technical information.

As the lessons became increasingly more detailed and complex, project staff had to seek the advice of specialists to ensure that the information was accurate and that the orientation of the lessons was consistent with national guidelines. With regard to practical details, there was a need to be sure that any information contained in the literacy materials was in line with government policies and that the materials did not confuse matters by offering contradictory advice. A number of government agencies were consulted to find out what they considered the major challenges in each of their sectors and to learn what information they felt villagers should have. These included the Department of Health, the Department of Agriculture, and the Department of Forestry. The task of the staff was to dramatize the information or to put it in a problem-posing form, and to present any technical facts in a form that the participants could read. In each case the concerned agency was asked to review the lesson for both technical accuracy and policy content.

**Presenting the Writing System?** Most writing systems have a phonetic base, with the written symbols corresponding in some way to the spoken language. Exceptions are the pictographic writing systems, such as Chinese, where meaning comes directly from the graphic symbol and is not mediated through sounds. The advantage of pictographic forms of writing is that they can be read by people who do not speak the same dialect. The disadvantage is that, whereas the sounds of a language are few (under 100), the possible meanings that may be expressed are vast.

Nepali is written in a phonetic script called Devanagari, the ancient writing system of the Sanskrit language and of the Hindu scriptures. It is not as economical as the Latin alphabet as there are 33 or 36 consonants, depending on whether certain joined letters are counted, and 14 vowels including one or two that are rarely used. The writing system is, nevertheless, phonetically more consistent than English.

Whereas in English it is often not possible to blend the sounds of individual letters (for example buh-a-tuh to get bat), Devanagari is written in syllables (for example paa-nii to get paanii). If one can name the syllables, one can say the word.

The syllable is an ideal unit for decoding written symbols. Although syllables are not as economical as letters because there are eight or ten possible syllables for every consonant, the phonetic correspondence makes syllables especially appropriate for beginning readers. The emphasis on sight words that comes up time and again in the debate about learning to read English is less important in a phonetically consistent script such as Devanagari. Although the process of abstracting the meaning of a written passage by referring to its sounds becomes less important to the more

experienced reader, it is a tremendous aid to learning in the initial stages. A phonetic approach builds on what the learner already knows -- speaking.

Reading is an active cognitive process that involves both analysis and synthesis. The reader scans the graphic symbols, analyzing the critical features of letters, clusters, or words. At the same time these individual features must be recombined or synthesized to construct the meaning of the new configurations. The keyword approach uses both analysis and synthesis. The word, first presented as a whole, is broken down into its component syllables (analysis). Then the syllables are recombined to form new words (synthesis). A fluent reader, or what one might call a sight reader, does not need to spend much time analyzing individual words or sounding them out unless, of course, they are unfamiliar. But beginning readers, for whom most words are unfamiliar, must spend a great deal of time analyzing words, until they have had enough practice to be able to decode the symbols automatically and without effort.

In Nepal, the keyword approach was entirely new to both the facilitators and the participants. They were accustomed, either through their own education or through listening to village children reciting their lessons, to the idea of memorizing the syllable families first. This could involve up to 500 syllables if one were to multiply all thirty-six consonants times the fourteen vowels. After some initial resistance to the keyword system, however, the participants began to realize that they were learning to read. In fact, they learned much more quickly by applying the cognitive skills of analysis and synthesis than the school children did using only memorization.

**What about Numeracy?** Numeracy activities were not included in the materials until the third revision. This inclusion was in response to requests from the participants who wanted an introduction to basic arithmetic. As staff could not access a substantive literature on teaching numeracy skills, they turned for guidance to math texts from the formal schools and looked for ways to adapt these methods to the program. The school texts assumed that each class would have a basic supply of equipment and materials, such as measuring sticks, scales, counters, blocks and so forth. The project budget could not supply any of these things, and experience had taught staff not to expect the facilitators to create their own materials. Furthermore, as staff soon discovered, the facilitators themselves had learned arithmetic in a rote fashion and had a weak understanding of number concepts.

The school texts provided staff with guidance on how to introduce numbers and the four arithmetical operations. The goal was to teach addition, subtraction, multiplication and division with numbers up to a thousand. Staff concentrated on activities that were concrete, that could be represented graphically, and that did not require any apparatus or materials that could not be found locally. The math sections were integrated with the literacy so that word problems could be created using the letters available in each particular lesson. This also made it



possible to relate the math sections to the theme of the lesson. For example, in a unit about afforestation, some of the math problems involved such things as adding the number of trees planted by different people.

In order to make number concepts concrete, facilitators were urged to have participants use real objects such as pebbles or kernels of corn when learning the basic number operations. This idea was so novel to the facilitators, who were accustomed to learning their sums from memory, that considerable resistance emerged. A thorough orientation to such methods in the facilitator training program was the only way to convince the facilitators even to give them a try. Even after training, most of the facilitators continued to regard the use of "props" as unnecessary extra work.

**Visual Literacy?** A modest body of literature has been produced on the subject of using pictures to communicate with illiterates. Much of the research is concerned with the relative merits of different pictorial styles, such as photographs, simple line drawings, or complex line drawings with shading and texture. Project research with Nepalese villagers had provided staff with a good indication of the possibilities and limitations of using pictures for development work.

With regard to the question of whether or not people who had little exposure to pictorial material could understand depicted objects, research showed that Nepalese villagers were very astute at perceiving what was shown, whether it was people or objects. The difficulty was not so much in seeing what was there as it was in getting meaning from a picture. People were unaccustomed to reading messages from illustrations. As far as Nepalese villagers were concerned, pictures were a form of decorative art rather than a tool for communication. It was for this reason that posters designed to communicate development messages on their own were frequently ineffective. Earlier work in nonformal education had assured staff, however, that pictures could be used as effective aids in teaching or, in conjunction with open-ended questions, as means to stimulate discussion.

Perception of pictorial content depends to some extent on the clarity of the illustration. For this reason the project opted for textured line drawings as opposed to photographs. Whereas photographs often looked muddy when printed, line drawings could be clearly reproduced on the offset presses available in Nepal. Drawings also gave materials developers much greater control over picture content, as they could highlight the important features, compose the relationships within the illustration, and leave out unessential background information. Having an excellent artist working with the program made this decision easy.

Staff discovered that although villagers could identify depicted objects, they had difficulty perceiving three dimensional spatial relationships on the flat surface of a drawing. Cues of depth, such as relative size, overlap and perspective, though understood at an intuitive level, were not sufficiently grasped at a conscious level to be used for interpreting pictorial space. Villagers were tested in the three types of spatial relationships identified by Piaget: topological, euclidean and projective.

Topological relationships are the earliest ones understood by infants and the first to be consciously grasped by children. These consist of relationships of proximity or separation, order or succession, enclosure or surrounding, and continuity. Projective and euclidean spacial concepts are more difficult to understand and develop somewhat later.

Projective space is concerned with the various perspective views of objects seen from different angles. For example, a plate seen from an oblique angle appears to the eye as an oval, but our mind is able to compensate for this visual distortion because it realizes that if the plate were rotated so that it could be seen head on, it would look round. Staff found that although village subjects could understand projective relationships at an intuitive level (they see plates all the time) they were not able to apply that kind of understanding to the interpretation of pictures.

Euclidean space refers to spatial relationships that remain constant no matter how an object is rotated. For example, if a map is turned around, the angles and distances between coordinates remains the same. Similarly, parallel lines, though they may appear to merge in projective space, as in the case of railroad tracks receding into the distance, remain parallel in euclidean space.

Project experiments showed that villagers had real difficulty interpreting projective or euclidean spatial relationships in pictures, but that they handled topological relationships easily. These findings provided staff with clear guidelines with regard to the use of pictures for communication. Topological space was relied on to convey the relationship of objects shown in pictures, and although perspective was used in order to make the pictures appear realistic, situations were avoided where important content or meaning was conveyed by perspective cues.

The fact that villagers could recognize depicted objects and could understand topological relationships gave project staff the confidence to use pictures in a wide variety of ways. For example, it was found that cartoon figures could be easily understood. The essence of cartoons is distortion -- the twisting, bending or enlargement of certain features in order to create an amusing caricature. But these distortions retain the topological relationships of the original features. For example, the nose, though large and bulbous, still appears between the eyes. Staff found that villagers not only understood cartoon characters, but enjoyed them and laughed at their funny appearance.

Order is another topological relationship. Villagers quickly grasped that a series of pictures could tell a story. They understood that each picture was a frozen moment in a continuous sequence. This made it possible to use comic style frames to depict action over time. Actual teaching of comic conventions, such as speech bubbles and lines of motion, made it possible to use comics to tell fairly elaborate stories or as scripts for sophisticated role plays.

The intent was not for pictures to communicate meaning on their own; rather they were seen as a means for encouraging discussion and analysis. For this reason, staff did not have to be overly cautious or conservative in their use of pictorial material. Participants' understanding could be stretched by using visuals that might be slightly beyond their comprehension. They could assist each other in groups to analyze and interpret the illustrations, and through this process they would become increasingly sophisticated picture perceivers.

### The First Steps in Preparing the Literacy Materials

The first task was to review and improve the list of keywords, as that would constitute the framework for the literacy materials. This was done through a process of brainstorming in which staff discussed the development themes to be included in the course and came up with a list of associated words. The words referred either to the absence or the presence of the development themes. For example, a unit on sanitation could be introduced either by a word such as saphaai (cleanliness) or by one such as phohor(a) (dirt). The final choice was made based on the letters to be introduced. The list was narrowed down to commonly used words, eliminating a number of more literary Sanskrit loan words which had appeared in the earlier nonformal education materials, such as swaasthya (health) and prakriti (nature).

The list of keywords began with words that contained commonly used consonants so that participants could start writing simple sentences after only a few words had been introduced. As more and more letters of the script were introduced, the staff had to revise the list. Some good words were eliminated because they contained no new letters. Other words were added because they contained letters which had not yet been introduced. The list was then reordered so that the elements of the writing system would be introduced in an orderly, incremental manner. Through this process, a list of twenty-five words or pairs of words were established as those which provided the skeleton for the literacy materials. A fuller discussion follows in Chapter Four about the development and subsequent revision of the list of keywords.

In the Devanagari script, each consonant has an inherent vowel associated with it, which makes each character a syllable. The vowel sound is changed by drawing additional lines above or below or to the left or right of the consonant. In addition to the vowel signs, there are free standing vowel characters which are used when a vowel sound is not connected to a consonant (as in the case of an initial vowel or when a vowel sound follows another vowel). In the literacy materials produced by the project, the vowel signs were introduced before the free-standing vowel characters.

Once the initial list of keywords had been agreed upon, staff began preparing text for reading practice. First, a matrix of consonants and vowel signs that were available for use in each lesson was prepared. For example, the first key word was kaam(a) (work) which contains four elements: two consonants and two vowels. One of the vowel signs is the

schwa, or unaccented "a", which is the inherent vowel that accompanies every consonant in its simple form. In this transcription the short "a" is written in parentheses because it is usually not sounded when it occurs at the end of a word. The other vowel is the long "a", which can be transcribed as "aa", and is made by drawing a straight vertical line after the consonant. The two consonants and two vowels produce four syllables: ka, kaa, ma and maa. Once constructed, these syllables can then be recombined to make other words.

The second key word, paanii (water), introduces two additional consonants and one more vowel sign, the long "i" which can be transcribed as "ii". The three new elements, in combination with the four introduced in the first lesson, yield a total of twelve syllables (4 consonants x 3 vowel signs): ka, kaa, kii, ma, maa, mii, pa, paa, pii, na, naa and nii. With these twelve syllables a great many common words can be written. In this way the number of possible syllables grows by multiplication in each new lesson, even though only two or three new elements are introduced.

The next task was to take the syllables and generate as many words as possible containing only those syllables introduced in the key words, or combinations thereof. With a list of words for each lesson the process of composing sentences began and the sentences were then put together into dialogues or short stories. In Lesson One, only four common words were selected. With the twelve syllables of Lesson Two, some twenty-seven words could be written, and a few of them could be combined to make phrases. With the twenty-four syllables of Lesson Three (six consonants and four vowels), a simple dialogue could be written. This necessitated the introduction of the first punctuation marks. By Lesson Five it was possible to compose a short story. Although time consuming, this process was creative and rewarding and resulted in materials which gave participants a good deal of reading practice as they built up their knowledge of the writing system.

#### The Program Moves to the Ministry of Education

In the summer of 1980, as preparation of the literacy materials was under way, two new developments occurred which affected the project. The first of these was an amendment of the original USAID grant which extended the program for an additional year and provided funds for expansion. The new funds enabled CERID to hire an additional seven supervisors, thereby doubling staff assigned to the project.

In an effort to consolidate activities in the adult education portfolio, the Ministry expressed a desire to take a more active hand in the nonformal education program being implemented by CERID. CERID handed the entire operation over to the Ministry. It was in the midst of developing the new literacy materials and hiring the new staff that the project was shifted to the Adult Education Section of the Ministry. With this move came a major change in staff and in the general work environment.



The move to the Ministry had several benefits. As a part of the Ministry, the program was in a much better position to be accepted and institutionalized as a national effort than it would have had it remained at CERID. Furthermore, the Ministry did not involve itself in the details of developing the new literacy materials but left those decisions to World Education and project staff. As long as work continued to go forward and to generate interest, the Ministry was content to keep the project under its wing.

The Ministry allowed the process of hiring new staff, started by CERID, to continue, and seven well-qualified candidates were selected. In September, 1980, the move to the Ministry was complete, and the first activity was to conduct a one-month training course for the new staff. The program was expanding from twenty classes in four districts (Nepal has 75 districts) to ninety classes in nine districts. Instead of two facilitators per class there would be only one. The new program was to include most of the nonformal education activities from the previous year plus the new literacy materials. The new staff was trained in the preparation and use of flexiflans, the presentation of puppet skits, and the use the previous year's discussion posters as well as a new set which was designed to introduce the key words.

By the time the supervisors were ready to leave for the field the first five literacy lessons had been reproduced. Initially, the materials were mimeographed with disappointing results: the pictures lacked contrast and were hard to make out, and the general quality was low. For subsequent lessons the materials were offset printed which produced a much better product, and the materials were ready for testing in the field. For each class a footlocker of materials was prepared. Each footlocker contained a blackboard, a flannel board, a set of puppets, lanterns, notebooks, pencils and a long list of other items. Ten of these footlockers went with each supervisor to his district.

#### Choosing a Format

The first three editions of the literacy materials were in looseleaf form. Folders were provided so that the participants could keep the lessons in order. The primary reason for giving the participants a new page each class was to create a sense of expectation and to motivate them to attend regularly. Also, single pages were thought to be less overwhelming and therefore less intimidating than a whole book, none of which the participants could yet read. There was also an economic reason. Loose sheets were inexpensive, and with drop-out rates ranging from 25% to 50%, there would be less wastage of materials than if participants were given all the course materials at the beginning. If participants lost a page or two it would not be as serious as losing an entire book.

After several class cycles, staff decided that loose leaf materials, though fine in theory, were a nightmare in practice. Distribution was the first headache, as facilitators had to keep track of hundreds of pages. The Ministry had to be sure all the materials reached all the districts. The facilitators had to know which page they were going to work on and

remember to bring copies to class. Often, staff came upon facilitators who had left the materials they needed for class at home. Participants who missed classes for legitimate reasons were always at a disadvantage. Worst of all, the participants had no idea how to keep the pages in an orderly manner in their files.

As the issue was debated, one compromise that was suggested was to produce a series of small booklets, each 24 to 36 pages in length. Staff were dissuaded when they found that the cost of printing the cheapest cardboard cover would exceed the cost of printing 32 pages of text on newsprint. Finally, in the autumn of 1983, a move was made to a book format. This turned out to be a good decision. For the first time, the program looked "packaged". The participants were pleased because they felt pride in owning a book, and the Ministry and the NGO community were equally enthusiastic about the new package.

The reading text was published in four books. In this way some of the earlier considerations that inclined staff to publish in loose leaf form could still be taken into consideration. Participants who dropped out would only have been given some of the materials. By the time one book got to be dog eared, it would be time for another one. Also, the participants were not overwhelmed by getting all the course materials at once.

The size and layout of the book were determined by the capacity of the press. The books were printed on the same newsprint that the press used for the two national dailies. The new press, which had been installed only a year or two previously, could print four plates simultaneously from two rolls on both sides of the paper. When cut, this made the equivalent of eight newspaper pages. The press automatically folded the cut newspaper in half, creating 16 pages, each about 12" x 16". Simply by folding the finished newspaper one more time by hand and trimming the ragged edges, 32 pages, approximately 8" x 10 1/2", could be printed at a time.

Several sizes of thickness were tested. Staff found that three printing forms could be nested together and saddle stitched with a cardboard cover to make a 96-page book. The central binding, where the staples are put in the spine rather than on the edge, was important as the newsprint was not very strong and could easily tear. The central binding allowed the books to be opened completely and laid flat. This process took maximum advantage of paper size and the printing area available on each offset plate and used the most modern printing facilities available in the country. When printing was done on a large scale (from 25,000 to 40,000 copies of each book a year), the cost of each 96-page book came down to about twenty-five cents (U.S.).

Once the decision was made to change to a book format, the staff held a competition to select a title. Out of about fifty suggestions, the choice was "Naya Goreto," which means "A New Trail." The individual books were subtitled The First Step, The Second Step, and so forth.

The book format freed staff to make many changes in the text. One of the major additions was the numeracy materials, which they were preparing to test that same year. At this same time the discussion posters were

enlarged from half a page to a full page. The books contained materials for discussion, reading, writing and number work and by their very arrangement, created a curriculum design.

Books did not begin with any foreword or introduction, as staff felt these were the participants' books and only things the participants could read should be included. Because the press was busy with the newspapers, project staff prepared the layout and pasted up the acetate sheets used to make the offset plates. The Devanagari text was photo-composed by the press. Photocopies of all the materials were made before starting with the cutting and pasting. The photocopies allowed staff to borrow words or even individual letters to correct misspellings and to make last minute editorial changes. For example, if a story would not fit exactly in the space designed for it, staff could shorten it as they were pasting it up. It was fortunate that staff had access to commercial photocopying services that could enlarge or reduce the art work, as this was a new service which had previously not been available in Kathmandu. This made it possible to easily integrate the pictures and the text before delivering the final copy to the press.

Careful attention was given to alternating pictures, number work, reading passages and writing exercises so that wherever the books were opened, participants would not be overwhelmed with too much text. Even the number work was punctuated with drawings. The first book contains ten lessons and the subsequent three books five lessons each, with the later lessons having much more substantive content than the earlier ones. The facilitator's guidebook suggests that two classes be taken to complete Lesson One, four each for Lessons Two and Three, five for Lessons Four and Five, and six classes for each of the remaining fifteen lessons. This makes a total of 110 classes to complete the course under ideal conditions.

Once the change was made to a book format, the program no longer had the appearance of an experimental program or a pilot project. In both the eyes of the Ministry and the NGO community, as well as of the participants themselves, the program appeared to gain in stature. The program now began to take on an identity; after all, the materials even had a name. Over the next year the Ministry's older Functional Literacy Program was phased out and Naya Goreto became the country's new national literacy program.

## CHAPTER FOUR

### THE KEYWORDS AND DISCUSSION POSTERS

"I want to be able to read the names of the gods before I die."

- A woman learner in a Ministry of Education literacy class.

In the Spring of 1981, after six-months of testing the new materials in the field, the first phase of the experimental project came to an end and underwent an outside evaluation. Negotiations for a second phase of the project were completed by the end of August, 1981. As the Government of Nepal's fiscal year had already begun, it was too late for the expanded project to be included in the Ministry's budget for that year. During that period the project could not run regular classes in the field.

Without the immediate pressure to run another cycle of classes, staff had a full year to review the progress made and to revise the entire set of learning materials based on experience in the field. Furthermore, the project was able to arrange for the supervisors to conduct a few classes themselves in order to test the revised materials. This turned out to be one of the most useful activities in the development of the entire program. Instead of observing or hearing about difficulties the facilitators encountered while using the materials, the staff had an opportunity to experience those difficulties first hand. Since the supervisors were also responsible for revising the curriculum, this experience provided an excellent source of precise feedback.

The second AID grant provided for a considerable expansion of the program. Instead of ninety classes, the project would be conducting 310. Instead of 3,600 participants, there would be over 12,000. With these increased numbers, priority was given to simplifying the learning materials and to standardizing the teaching methods. As popular as handmade materials such as puppets and flexiflans had been in the field, their production was now beyond the program's capacity. It was necessary to bear in mind the ultimate objective of institutionalization. To supply ninety classes had required a tremendous effort. The cost of providing such materials to even more classes would have made the program impractical for the Ministry to operate on a large scale.

The new project called for an increase in staff, and by December, 1982, a total of ten supervisors, twenty-one assistant supervisors and seven specialists were on board and ready to begin work. The literacy



materials were now in their third edition and ready for full scale testing. At the end of each class cycle (the six month winter period when classes were generally held), the materials were again reviewed and revised.

### The Discussion Posters

As part of the process of simplifying the materials, project staff decided to discontinue the use of two separate sets of discussion posters, one to stimulate thinking about issues and another to introduce keywords for the literacy lessons. The two functions were merged into one set. Each literacy lesson was to begin with the discussion of an issue and lead to the introduction of a keyword.

The posters showed situations that were generally open-ended but contained specific problems or themes which project staff hoped would be brought out in the class discussion. While facilitators were trained to use the five finger method described in Chapter Two as a way to ask different kinds of questions to guide the discussion, many found that making up original questions was a difficult task. The larger size of the training groups and the shorter duration of the training programs often did not allow new facilitators enough time to develop confidence in making up their own questions. To remedy this, some sample questions were offered as part of a lesson plan to accompany each poster.

Figure 1



Although the sample questions were intended to be guidelines or suggestions, staff found that the facilitators took the questions literally and felt obliged to ask all the questions on the list, even when the points had already been covered in the discussion. As a result, the discussions were sometimes tedious and repetitive, as they were guided by the written questions rather than spontaneous interaction between the facilitator and the participants. Without a great deal more training -- more than the ten day program would be able to provide -- most facilitators would not be able to lead the participants into deep analysis or genuine reflection. In light of this reality, project staff began to reassess the objectives of the picture discussion and to redesign the procedure.

The literacy materials contained a small version of each poster at the beginning of the lesson to remind the participants of the theme of the lesson and to provide an illustration to accompany the keyword. In the fourth edition of the materials, the approach was changed altogether. Instead of having the facilitator guide a discussion of the poster it was decided to let the participants carry out their own discussions in small groups. To help foster that kind of discussion, the project printed a full page reproduction of the poster in each participant's book and had the facilitator divide the class into small groups to study the picture. At first, the facilitator was asked to move quietly from group to group, listening to the discussions, and encouraging the participants to analyze the picture in greater depth. But this turned out to be unrealistic, not only because the task itself was somewhat vague, but because the rooms where the classes were held were generally too small to allow the facilitator to move from group to group.

Staff continued to look for a design for this activity that would be manageable and yet produce effective learning. The goal of having the participants analyze each picture in depth was dropped. The staff decided that this in-depth analysis was less important than having participants engage in a problem-posing, self-directed learning activity. Staff decided to let the process be more gradual in hopes that after more experience, participants would begin to probe more deeply.

The eventual design for this activity involved three steps. In the first step the learning group was divided into small groups to look at the picture. Each group was asked a general question such as, "What do you gather from this picture?" In the second step, one member from each small group came to the front of the class and used the large poster of the same picture to point out what his or her group saw or understood. This in itself provided a real learning experience for the participants, because it was the first time for many of them to stand in front of a group and make a formal presentation. During the early lessons, it was common to find both women and men who were visibly nervous when it came their turn to speak. But the amount of self confidence they gained after only a few lessons was remarkable. In the third step of the activity, the facilitator asked four or five questions from the guidebook. These questions were of the type staff had originally hoped facilitators would make up themselves, such as "Why do you think this is happening?" or "Do we have this problem in our village?" or "How do you think this person feels?"

Originally, the posters were printed on cardboard, using only one side of a sheet. The full set of twenty-five posters proved to be quite a hefty bundle to carry to the field. Other formats were examined in an effort to bring down both the cost and reduce the size of the materials. Eventually, the posters were reduced somewhat in size so that each one was 15" high by 20" wide. Since the participants had already studied a smaller version of the picture in their books, the posters were large enough to use for the general discussion. The dimensions were determined by the size of a standard sheet of map-litho paper available in the bazaar and the size of a printing plate at the Gorkhapatra Press, where the materials would be printed. The maximum size which could be printed there was a page 20" by 30". Maximum advantage was taken of the size of the printing plate by reproducing two posters per plate, and the amount of paper used was reduced by printing on both sides -- four posters per sheet. The entire set of twenty-five posters could thus be printed on seven sheets of paper allowing extra sides for a cover and a back. The sheets were folded in the middle and saddle stitched so that the pages would not tear when folded. To avoid costly or complicated bindings, two holes were punched in the top and laces were threaded through the holes. In this way the facilitator could turn to the poster for any given lesson and hang the picture on the wall like a calendar. This set of materials was called the "Discussion Poster Calendar."

#### The Keywords

Much of the literature on the use of keywords stresses that the words should be dynamic and have personal meaning and immediacy for the learner. Sylvia Ashton-Warner, for example, working among Maori children in New Zealand, elicited key vocabulary words from each individual student. Paulo Freire, in his work with adults in Brazil, drew his words from the "generative themes" (the values, hopes, doubts and anxieties) that were faced by learners in their everyday lives.

In Nepal, participants often wanted to learn first how to write their names. Beyond this, it was not practical to create individualized lists of words. The facilitators did not have the training and experience to individualize instruction, nor was it feasible to have staff investigate the "generative themes" of specific regions or communities. The objective of the project was to produce a single set of materials for the entire country. Nevertheless, staff used their extensive field experience and common sense to come up with a list of words that were likely to stimulate discussion and that would touch on themes important to social and economic development. Figure 2 presents the list of keywords eventually chosen for inclusion in the materials and the new elements of the writing system that each word introduced. The theme of each discussion poster is also given.

FIGURE 2

| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                       | <u>New Syllables</u>                                                        |
|---------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1             | <u>kaam (a)</u> (work)<br>Discussion about various types of work.                      | <u>ka</u> , <u>ma</u> , <u>aa</u> -vowel sign                               |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                       | <u>New Syllables</u>                                                        |
| 2             | <u>paanii</u> (water)<br>Discussion about safe water.                                  | <u>pa</u> , <u>na</u> , <u>ii</u> -vowel sign                               |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                       | <u>New Syllables</u>                                                        |
| 3             | <u>khetii</u> (agriculture)<br>Discussion about how animals and people get their food. | <u>kha</u> , <u>ta</u> , <u>e</u> -vowel sign                               |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                       | <u>New Syllables</u>                                                        |
| 4             | <u>chhimekii</u> (neighbor)<br>Discussion about problem solving through dialogue.      | <u>chha</u> , <u>i</u> -vowel sign                                          |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                       | <u>New Syllables</u>                                                        |
| 5             | <u>maanchhe</u> (man)<br>Discussion about population pressures.                        | Introduction to conjunct syllables: <u>nchhha</u> , <u>nna</u> , <u>kka</u> |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                       | <u>New Syllables</u>                                                        |
| 6             | <u>lugaa</u> (clothing)<br>Discussion about clothing and culture.                      | <u>la</u> , <u>ga</u> , u-vowel sign, more conjunct syllables               |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                       | <u>New Syllables</u>                                                        |
| 7             | <u>gariib(a)</u> (poverty)<br>Discussion about the causes of poverty.                  | <u>ra</u> , <u>ba</u> , more conjunct syllables                             |



| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                                                    | <u>New Syllables</u>                                                       |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 8             | <u>paisaa</u> (money)<br>Discussion about ways to earn money.                                                                                       | <u>sa</u> , <u>ai</u> -vowel sign<br>more conjunct syllables               |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                                                    | <u>New Syllables</u>                                                       |
| 9             | <u>goThaalo</u> (shepherd)<br>Discussion about the pros and cons of sending children to school.                                                     | <u>Tha</u> , <u>o</u> -vowel sign<br>more conjunct syllables               |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                                                    | <u>New Syllables</u>                                                       |
| 10            | <u>bikrii garnu</u> (selling)<br>Discussion about discretionary money and nutrition.                                                                | Introduction to conjunct forms of <u>ra</u>                                |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                                                    | <u>New Syllables</u>                                                       |
| 11            | <u>pahiro</u> (landslide)<br><u>du:kha</u> (sorrow)<br>Discussion about landslides and deforestation.                                               | <u>ha</u> , <u>da</u> , the <u>bisargha</u> ,<br>more conjunct syllables   |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                                                    | <u>New Syllables</u>                                                       |
| 12            | <u>sautaa</u> (co-wife)<br><u>jhagaDaa</u> (quarrel)<br>Discussion about polygamy.                                                                  | <u>jha</u> , <u>Da</u> , <u>au</u> -vowel sign,<br>more conjunct syllables |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                                                    | <u>New Syllables</u>                                                       |
| 13            | <u>rediyu</u> (radio)<br><u>bhakaarii</u> (a kind of bamboo basket for grain storage)<br>Discussion about local technology and imported technology. | <u>ya</u> , <u>bha</u> , more conjunct syllables                           |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                                                    | <u>New Syllables</u>                                                       |
| 14            | <u>thicho micho</u> (oppression)<br>Discussion about oppression.                                                                                    | <u>tha</u> , <u>cha</u> , more conjunct syllables                          |

| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                       | <u>New Syllables</u>                                                                           |
|---------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 15            | <u>ghuus(a)</u> (bribe)<br>Discussion about bribery.                                                                   | <u>gha</u> , <u>uu</u> -vowel sign, more conjunct syllables                                    |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                       | <u>New Syllables</u>                                                                           |
| 16            | <u>parivaar (a) niyojan (a)</u><br>(family planning)<br>Discussion about family planning measures.                     | <u>wa</u> , <u>ja</u> , more conjunct syllables                                                |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                       | <u>New Syllables</u>                                                                           |
| 17            | <u>phohar (a)</u> (dirt)<br><u>jhingaa</u> (flies)                                                                     | <u>pha</u> , <u>nga</u> , the conjunct syllable <u>ngga</u>                                    |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                       | <u>New Syllables</u>                                                                           |
| 18            | <u>ghaans(a)</u> (grass)<br><u>jangal(a)</u> (forest)<br>Discussion about afforestation.                               | The nasal modifiers:<br><u>chandra bindhu</u> and <u>siri bindhu</u> , more conjunct syllables |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                       | <u>New Syllables</u>                                                                           |
| 19            | <u>anpaDh (a)</u> (illiterate)<br><u>dhokaa</u> (deception)<br>Discussion about the disadvantages of being illiterate. | <u>a</u> , <u>Dha</u> , <u>dha</u>                                                             |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                       | <u>New Syllables</u>                                                                           |
| 20            | <u>aago</u> (fire)<br><u>churoT (a)</u> (cigarette)<br>Discussion about accidents in the home.                         | <u>aa</u> , <u>Ta</u>                                                                          |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                       | <u>New Syllables</u>                                                                           |
| 21            | <u>aaimaaii</u> (woman)<br>Discussion about the role of women in society.                                              | <u>i</u> , <u>ii</u>                                                                           |

| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                            | <u>New Syllables</u>                                                                          |
|---------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 22            | <u>gaaun panchaayat (a)</u><br>(village council)<br><u>ekataa</u> (unity)<br>Discussion about community<br>decision making. | <u>u</u> , <u>uu</u> , <u>e</u> , <u>ai</u> , the<br>conjunct syllable <u>ncha</u>            |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                            | <u>New Syllables</u>                                                                          |
| 23            | <u>okhatii</u> (medicine)<br><u>auSadhi</u> (medicine)<br>Discussion about illnesses.                                       | <u>o</u> , <u>au</u> , <u>Sa</u>                                                              |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                            | <u>New Syllables</u>                                                                          |
| 24            | <u>agyaan(a)</u> (ignorance)<br><u>shikSaa</u> (education)<br>Discussion about the advan-<br>tages of education.            | <u>sha</u> , the conjunct<br>syllables <u>gya</u> and <u>kSa</u> ,<br>more conjunct syllables |
| <u>Lesson</u> | <u>Keyword(s) and Discussion</u>                                                                                            | <u>New Syllables</u>                                                                          |
| 25            | <u>RiN (a)</u> (loan)<br>Discussion about obtaining<br>credit from banks                                                    | <u>Ri</u> , <u>Na</u> , the conjunct<br>syllable <u>kRi</u> , more<br>conjunct syllables      |

The list of keywords and discussion topics evolved over several editions of the literacy materials. In the second edition of the materials, which staff had tested in the field themselves, there were twenty-one lessons. It was found that too much new material was presented at once in several of the lessons. As a result, these lessons were split into two. For example "neighbor" and "man" became separate lessons, as did "poverty" and "money." "Oppression" and "bribe" were similarly separated. New posters were drawn to illustrate the additional themes. A lesson on "daughter-in-law" and "sorrow" was changed to "landslide" and "sorrow". "Landslide" introduced the same new letter that "daughter-in-law" had introduced, and landslide allowed for discussion of erosion. Staff felt that the theme of "daughter-in-law" was too similar to the discussion about "co-wives" in the subsequent lesson and that landslides were a serious ecological problem. In deference to one of our funding sources, a lesson on "family planning" took the place of an earlier lesson on "forest" and "animal" which had introduced the same new letters. The word "forest", which also uses a nasal modifier, was reassigned to a new lesson, along

with "grass", in order to introduce the two nasal modifiers. In this way, some reworking and fine tuning of the list of keywords and discussion themes was possible.

As discussed in Chapter Three, the participants themselves were at first resistant to the keyword approach to introducing the letters of the alphabet. They had heard the village children repeating the Nepalese equivalent of "A is for apple, B is for boy..." and felt that they were not being taught properly. Similarly, some of the facilitators, who were themselves primary school teachers, felt that they knew how to teach reading and writing and that they did not need to learn "new tricks". Once exposed to the keyword method, however, both participants and facilitators accepted it and became enthusiastic about it. They quickly realized that this approach led to the acquisition of reading skills without rote learning. Several of the primary school teachers even began to adapt some of the methods to their formal school classrooms.



## CHAPTER FIVE

### READING AND WRITING

"Even if I just learn how to write my name, I will be happy."

- A learner in a Ministry  
of Education literacy class

There were a number of common sense principles that guided project staff in the development of the literacy materials. The first of these was that there is no better way to develop a skill than by practicing it. For this reason, reading practice was included in the materials from the start, using only the few syllables that had been introduced. Participants encountered the syllables in many different contexts, had ample opportunity to decode words, and had a chance to grow accustomed to the reading process.

The number of new syllables increased in small increments as participants' speed and confidence increased. Whereas school children in Nepal quite often begin by memorizing the alphabet and all the related syllabic families before they begin to read, the entire alphabet was not presented in the literacy materials as a unit until the participants were already competent readers -- on the last page of the materials.

The second principle was that the learning activities had to be fun. Learning to read was hard work and required both drill and repetition, but practice was made enjoyable and stimulating.

To achieve these two principles, the learning materials were revised many times. Staff tested and improved them, making sure they were clear and attractive. The following section describes the various kinds of materials and approaches used in the project.

### INTRODUCING THE WRITING SYSTEM

Sessions were designed so that participants first discussed the themes in a poster. Then, the facilitator presented the keyword for the lesson. When the materials were first used, the facilitators wanted the participants to guess the keyword based on the discussion, and they were disappointed when the participants could not do so. They felt the poster and the discussion had failed to bring the participants to an understanding

of what the word meant. This problem was resolved by eliminating any guessing about the keyword. The facilitator would simply say, "We have been discussing water, now I'm going to show you the word water."

### Syllable Cards

Syllable cards were used to introduce the keywords for the first five lessons. Each card was approximately two inches by three inches with syllables large enough to be seen from the back of an ordinary room. These cards were originally used on flannel boards. When the other flannel board activities were eliminated from the learning materials, holes were punched in the top of the cards and they were hung from headless nails in the wall. This required a little preparation on the part of the facilitator, as the nails had to be just far enough apart so that the edges of the cards touched to make a word. Another set of nails was spread out so that the remaining syllables could be displayed separately.

The facilitator hung the two syllable cards on the nails to make the keyword for the lesson, for example "water" (paa nii). After repeating the word several times, with the class repeating after him, the facilitator displayed the two syllable cards separately and pronounced each one in turn: "This is paa. Repeat after me, paa. This is nii. Everyone say nii." After several repetitions the facilitator completed the syllable families. For this purpose a series of nails were mounted in rows on the wall. As the facilitator hung up each syllable card, he pronounced the syllable and explained any new features of the writing system and asked the participants to pronounce any syllables they might know. This series of syllable cards was called the Discovery Chart. The entire Discovery Chart for Lesson Two was as follows:

|    |     |     |
|----|-----|-----|
| pa | paa | pai |
| na | naa | nii |
| ka | kaa | kii |
| ma | maa | mii |

The four syllables using the simple forms of the letters "ka" and "ma" and the long "a" vowel sign "kaa" and "maa" had been presented in Lesson One. The new features introduced in Lesson Two, the letters "pa" and "na" and the long "i" vowel sign (ii) ("pii" and "nii"), were explained by the facilitator.

While hanging up each syllable card, the facilitator pronounced the syllable and asked participants to repeat it. For example, while hanging up the syllable card "paa", he might say, "Look at this syllable. It looks like "pa" but it has this extra line after it. Who can remember what this line is called?" The answer would be that it is called an "aa-kaar". If none of the participants remembered this grammatical term from the previous lesson, the facilitator reminded them. Then he would ask, "How does this line change the way this letter sounds? Who can pronounce this syllable?" By proceeding in this way, the facilitator encouraged participants to use the knowledge they had of the Devanagari script to analyze the features of a new syllable and to try to figure out how it ought to be pronounced.

Though difficult in the early lessons, the participants quickly learned how to decode the syllables and apply the rules they had already learned to new situations.

The size of the syllable cards was determined by the size of the cardboard that was available in the market and the size of a printing plate. All materials were designed with printing in mind so that the least amount of paper or printing surface was wasted, as these were the primary costs involved in replicating the program on a large scale.

The idea of hanging the syllable cards on nails was cost effective but did not always work as well as anticipated. Cement walls were too hard for the nails and some mud walls were too soft and crumbly. A large plank or piece of wood was ideal. In open places the cards tended to blow off the nails if there was a gust of wind. In such cases a rubber band was stretched across the bottom of the cards to keep them in place. Many facilitators used the back of the blackboard for hanging the syllable cards. This method worked fairly well, except that the blackboard and the syllable cards could not be used at the same time. This was a material that had to be adapted to each particular classroom as the cards were needed only for the first sixteen days of class.

#### The Game "Challenge"

Once the syllables were introduced, the participants needed to learn them well enough to be able to use them. This required some form of drill or repetition. Project staff found that facilitators naturally fell into the pattern of primary school teachers, pointing to each syllable in turn, calling it out, and the class repeating it after them. As everyone seemed comfortable with this kind of drill, staff decided to adapt it and turn it into a more participatory activity through a game called "Challenge."

As soon as the syllables in the Discovery Chart were put up for all to see, the class was divided into two groups. A fast learner from each half was asked to come to the front to be a "captain." The captain's job was to drill his or her team in all the syllables, much as they had observed the facilitator doing. After five or six minutes, the other captain would drill the other half of the class. In this way the class had its drill led by two participants. After both sides had a chance to review all of the syllables, the facilitator mixed up the syllable cards. Participants were then called upon to identify the syllables from the visual cues and not from their positions in the syllable family. For the last activity each captain in turn "challenged" a member of the opposite team to read one of the syllables. One participant kept score by tallying correct responses. This performance test quickly measured whether participants were ready to move on.

### Letter Charts

Beginning with Lesson Six, a series of Letter Charts, which were similar in format to the Discussion Poster Calendar, were introduced to display all of the new syllables learned in any particular lesson. From Lesson Six, where the total number of syllables learned had reached almost 60, it was no longer practical to present the syllable families in their entirety. Blackboards were not large enough, and it took too long to write them. The Letter Charts helped the facilitator present the new material in a clear and orderly fashion, and they were used by the participants to drill one another in the new letters. An added feature was that the flip side of each chart had a jumble of 20 syllables, some new and some old, which were used to play "Challenge."

### Conjunct Letters

As each letter in Nepali in its simple form contains an inherent short "a" vowel sound, consonant clusters present a special problem in the Devanagari script. In the Ministry's previous literacy course this part of the writing system was not presented until all the letters were introduced. In the new materials, the problem was tackled early on. Consonant clusters are very common in Nepali, and are needed to write text. Furthermore, staff felt that it would be easier to recognize and understand how these new combinations were formed early on in the course, when only a few letters had been introduced.

The first examples of consonant clusters were presented in Lesson Five, after only seven consonant signs and five vowel signs had been introduced. The keyword for Lesson Five is "maanchhe" (man). It consists of the syllable "maa" and the conjunct syllable "nchhe." The conjunct syllable is written by removing part of the written syllable "na", the stem, and joining what remains to the syllable "chhe" creating a new syllable which contains a consonant cluster plus a vowel sign. Most conjunct syllables are logically combined and a careful inspection of the elements will reveal what two or three syllables are joined. In a few cases, however, the new configuration cannot be deduced and must simply be learned as though it were a new symbol. In fact, three conjunct letters (ksa, tra, and gya) are treated as independent letters of the alphabet even though they are combinations of other letters.

Conjunct letters are introduced with a formula such as:

$$n/ + chhe = nchhe$$

These formulas were given in the participants' books and acted as a ready reference for difficult combinations. The first method used for introducing the consonant cluster was to have the facilitator write the formula on the blackboard and, while pointing to each element in the formula, say "Half na plus chhe equals nchhe." Since some of the consonant clusters proved to be a mouthful and many of them were unpronounceable without the appropriate acoustic environment, the procedure was modified in the following way:  $n/ + chhe = nchhe$  **maanchhe**.



In this instance the facilitator pointed to the elements in the formula and introduced the consonant cluster saying: "Half na plus chhe written together looks like this, as in maanchhe." This small adjustment made the presentation of consonant clusters much more efficient.

For review, pages of consonant clusters were included in the Letter Charts. The conjunct formulas, and examples of words using them, were presented on one side of the calendar. The flip side showed only the conjunct syllables. After reviewing the first side of the calendar, participants turned it over and "challenged" one another to identify what two letters made up a particular conjunct syllable and gave an example of a word that uses it.

### "Match Letters"

A game of concentration, "Match Letters", was developed to provide participants with more practice identifying the syllables introduced in the first two lessons. The game used twenty-four small cards, each about one inch square. In the set there were two cards for each of the twelve syllables of Lesson Two. The game was designed to be played with the cards spread out face down in the middle of a group of six participants. The first participant turned over one card and named the syllable. He then turned over another and named it. If the two matched, the participant kept them. If not, he turned them face down and placed them back in their original positions. The game provided practice in recognizing the syllables in random order. Each class was given four sets of the game so that at least twenty-four participants could play at one time. Those not playing watched and offered suggestions and commentary on the progress of the game.

### LEARNING TO READ

Once the syllable families for each new lesson were introduced by completing the Discovery Chart and practiced by playing Challenge and Match Letters, participants began to use the syllables for reading. In the early versions of the materials the first page of a lesson was the keyword page. It consisted of a small version of the discussion poster, the keyword and the Discovery Chart, followed by twelve to fifteen words using the new syllables. Participants sounded out these words using their knowledge of the syllables.

In actual practice, however, staff found that facilitators and participants slipped quickly into the primary school pattern where the facilitator read the words and the class repeated them. Although staff felt that some learning might still be taking place, investigation proved otherwise. In one instance, one young woman was observed reading out loud from the bottom of a keyword page while waiting for the class to begin. A list of English words is given below in order to describe how the woman was observed practicing:

|     |     |
|-----|-----|
| sit | sat |
| bit | bat |
| fit | fat |
| hit | hat |

She recited the Nepali words on the page in this order: "Sit, bit, fit, hit, bat." Over and over again, "Sit, bit, fit, hit, bat." Her fingers pointed at the correct words as she said them. An observer pointed to "sat" and asked her why she did not read that word as well. She replied that the facilitator had not yet taught that word nor had he taught any of the remaining words. There are only 12 syllables in Lesson Two and the same syllables that she was reading were repeated in the words she claimed she could not read. Similarly, other students were observed who appeared to be able to read the Discovery Chart in the lesson fluently ("Pa paa pii, na naa nii, etc") but if someone pointed to an individual syllable, they could not read it. Experiences such as these indicated that participants were relying only on their memories and were not analyzing the written symbols.

#### Breaking the Patterns of Rote Learning

In order to break the pattern of rote learning, a number of design changes were made in the materials in order to encourage phonetic decoding of the written symbols. The concentration game, "Match Letters," was one such technique. It required recognizing the syllables in isolation and in random order. Another change was to have the reading of the keyword page carried out in small groups. Participants were asked to help each other read the words at the bottom of the page. This eliminated a situation where the facilitator pronounced the words out loud and participants repeated them without even looking at the page.

In order not to deprive the learners of what they felt was an essential part of learning, oral drill was included as well. After the small groups had ample time to study the words together, one participant from each group was asked to come to the front and read the list out loud. Staff found that after each word was read the class often spontaneously repeated it (as they had so frequently heard primary school children do). This same response was included in the activity. Oral reading and repetition were retained, but with a difference. The reading of sentences and stories was handled in a similar way. After the story had been studied in small groups, a participant from each group came to the front and read the story, pausing at the end of each phrase so that the class could repeat it in chorus.

Another tactic to encourage analysis of the written symbols was a box of jumbled syllables which was printed with each lesson. These included syllables from the Discovery Chart, but not in the same order. Unlike the Discovery Chart, which could often be recited with one's eyes closed, this series of syllables required concentration. The jumbled syllables were usually presented on the second day of a lesson to consolidate and review learning.

### Three Card Games for Reading Practice

Several card games were developed to encourage further reading practice. One of these, Make Words, was played with the syllables learned in Lessons, One, Two and Three. The game was played with a set of thirty cards that were slightly larger than those in the other concentration game so that the two sets of cards would not be mixed up. The syllables in this game were determined on the basis of a frequency count of the sixty or so two-syllable words that could be made with the syllables included in Lesson Three. (For example, there was only one "ka" but four "kaa's.") To play the game, the cards were spread out face down and each player drew two, pronouncing each syllable out loud. If the player could make a word from the two syllables, he or she kept the cards. If not, the cards were returned to their original places face down. This game provided practice combining syllables to make words. Although the task was difficult for beginning readers, the opportunities for success were much greater than in the concentration game since the chances are better than even that any two syllables picked could be combined to form a word. Four sets of Make Words were provided to each class.

The second game recycled the syllable cards used for making the Discovery Charts in the early lessons. Called the Syllable Card Game, it was played during Lessons Four and Five. Of the forty syllable cards, four were taken out because they were partial syllables used to introduce conjunct letters. The remaining thirty-six cards were shuffled and dealt into four piles of nine cards. The class was divided into four groups and each group was given a set of cards. The object was to make as many words as possible from the nine cards. Syllables could be used as often as needed to make new words. At the end of ten or fifteen minutes each team counted up its list of words. The team with the fewest words traded sets with the team that had the most words. The other two teams also traded sets and they continued to make words for another ten minutes. Trading sets evened out vagaries in the distribution of the cards. Even so, with some sets it was easy to make words while with others it was difficult. At the end of the game the team with the most words won and read its list of words.

The third card game, Letter Rummy, was played with the syllables learned up through Lesson Six. Sixty cards made up the deck, with syllables chosen on the basis of a frequency count. The object of the card game was to make two-syllable words. Several variations of the game were experimented with before settling on the simplest. In the card game, each player held only one card. The player whose turn it was could choose the top card in the discard pile, which was face up, or take a chance by drawing from the deck. If the card in the player's hand and the one picked up made a word, the player read the word and put the cards aside, drawing another card from the deck. If no word could be made, one of the two cards had to be discarded. In this way each player always held one card. A player had only one chance to make a word before the turn passed to the next person.

All of the card games were lively and popular. Each player received assistance either from onlookers or from other players. The games offered the participants a chance to use the syllables in an informal and supportive group setting. In the early stages of the literacy course, they provided practice and moved the learners away from rote memory approaches to reading. Staff found that as the participants began to read more complicated material, the games became less important.

In early attempts to introduce games, staff tried to encourage the facilitators to prepare their own game sets. This preparation was done during the training program itself, but it was difficult to get facilitators to do any substantive preparation of materials once they were back in their own villages. For this reason, the project supplied the games ready-made.

The exact size of the game cards was determined by the size of the cardboard used for printing. The syllable cards and four sets each of the two concentration games were printed on a single 22" by 28" sheet of thick cardboard for a total cost of about twenty cents (U.S.). The Letter Rummy sets were printed on thinner cardboard.

#### Sentence Building Practice

The reading activities in the early versions of the materials moved directly from word practice on the keyword page to short reading passages. Originally, drill was minimized and involved only isolated words. Words made more sense as part of a meaningful reading passage than by themselves alone. However, experience showed that participants focused so much on decoding the words that they often lost track of the meaning. By the time they had reached the end of a five word sentence, they risked having forgotten the beginning. They were not yet skilled enough readers to be able to utilize meaning as one of the analytical tools for guiding them through the text. More practice was needed in order for participants to gain sufficient fluency so that the decoding process did not take so much effort.

Therefore, in order to provide this extra practice with the syllables, additional words were added for study. The additional lists also meant that the participants did not have time to memorize the text as they moved on to new examples.

Then, in order to give the participants practice reading longer sentences, sentence building practice was included in the text. An example would be:

Kancha is surprised.  
There are fish.  
There are fish in the water.  
Kancha is surprised because there are fish in the water.



All of the longer sentences in a lesson would first be practiced in short sequences. Later, the fragments would be drawn together into a meaningful story. Sentence building exercises of this kind were introduced in Lesson Five and continued through Lesson Fourteen.

### Punctuation

The first punctuation, the period and the question mark, was introduced in the context of a short dialogue in Lesson Three. Although the names for punctuation marks were outside the normal language of the learner, facilitator used the names in class and before long the participants were able to use the terms.

In Chapter Four the "halanta" was introduced. This is a short line added to the lower right-hand corner of a simple consonant to indicate that the inherent vowel sound is not pronounced. A "halanta na" is pronounced without the schwa (for example, the word "Rama" with a halanta would be pronounced "Ram"). This punctuation mark is used on many verb endings and was useful in helping to introduce conjunct letters in Lesson Five.

Other writing conventions were introduced as needed. They included the comma (Lesson Five), the exclamation point (Lesson Six), paragraphs (Lesson Eleven), and quotation marks (Lesson Fourteen).

### Preparing the Reading Text

As mentioned previously, project staff prepared the literacy materials and passages for reading practice. They prepared reading texts on themes closely related to the keywords. The stories in the early stages were general in nature, as staff were restricted in what they could write by the syllables that had been introduced, but after ten lessons staff were no longer constrained by a limited number of syllables and could broaden the topics. If the letters were not present to say something one way, another way was sought. As the course proceeded, the written passages became increasingly more functional, and filled with content relevant to social and economic development.

Through consultation among the staff, or with advice from outside experts, the general content of the text was determined. Various treatments of the subject matter were then discussed, usually with a view to dramatizing it in story form. Individuals or small groups were assigned to write a story and present it to the rest of the staff for review. When staff could not come up with a satisfactory outline, several individuals would try their hand at an approach, and the group would listen to all of them and select the most promising. Sometimes, parts of two stories would be combined. The situations were realistic and the language was typical. Once written, each reading passage was screened for letters that had not yet been introduced.

## LEARNING TO WRITE

Many of the participants in the program had never held a pencil before coming to their first literacy class. On the first day of class the participants were asked to copy shapes which the facilitator drew on the blackboard -- circles, plus signs and X's. Of these the X is the most difficult, as diagonal lines are often the hardest to master.

The facilitator drew the shape several times slowly while the participants watched. The participants then tried to copy the shape in their notebooks. If the facilitator noticed that any of the participants were having trouble, he would call that participant to the blackboard and, holding his hand, guide him in reproducing the shape. This method solved most problems, since the participants, once assisted, could usually return to their places and draw the shapes in their notebooks successfully.

The reading text also doubled as a workbook, and the shapes and letters to be learned were reproduced on the page with space provided for copying them several times. Once the participants had practiced in their notebooks, they copied the shapes or letters on the workbook pages of their books. Although some of the Devanagari letters are quite complex and many of the participants wrote very slowly, staff found that learning to write did not pose any particular difficulties.

### Writing Games

Even before the participants could handle a pencil with confidence they had opportunities to construct words using the letter cards. In the early classes it was observed that when the facilitators called individual participants to the front and dictated words to be written on the blackboard, the rest of the class was not involved and became distracted. Staff looked for ways to make this activity more participatory by developing appropriate games.

The first of these, Dictation Game, was played starting in Lesson One. With the syllable cards for the lesson hung in rows to make the Discovery Chart, one participant was called to the front. Members of the class suggested words from the lesson for the participant at the front to make with the syllable cards. The class checked to see that the word was spelled correctly. After three or four words a different participant was called to the front. Only five or six participants made words during any one class, but over time everyone had many chances to play. The class was involved because they "dictated" the words to be written. Sometimes they suggested words not in the lesson but in their local languages. After Lesson Five the game was played by writing the dictated word on the blackboard. By turning this activity into a game the participants were put in charge and the facilitator's role lessened.

A second writing game was introduced in Lesson Two. For this game, Word Chain, the class was divided into four teams: A, B, C and D. One member from each team was asked to come to the front of the room. Syllable cards were used up to Lesson Five, after which the game was played by

writing on the blackboard. The game began with the keyword, which in this case was "paanii" (water). The participant from team A made a new word which used one of the syllable cards displayed, either the "paa" or the "nii." For example, the participant could make a word such as "paanaa" (page). Then, it was the turn of the participant from team B to make a new word using either the "paa" or the "naa". Words could not be repeated. Teams were encouraged to help their representative. One participant kept score by tallying correct responses. The teams kept everyone involved and gave moral as well as creative support to the participants at the front.

The participants were asked to suggest words that could be made from the Discovery Chart right after it had been completed, but staff found participants' responses to be hesitant and confused. Staff decided to have the participants use the syllables to read words before asking them to create their own. Once they felt confident enough about the new syllables, they were able to create words readily and, as already mentioned, they even felt comfortable enough to create words from their own dialects that were not in the text. This procedure seemed to address the main purpose of having the participants create their own words -- learning the syllables.

While these writing games were very similar to the reading games, they were more open to creative responses. In the reading games, the choices were restricted to making words by arranging two or more given cards. In the writing games all of the letters were available for use.

Another writing game was carried out in small groups using the Discovery Chart printed in the participants' own text. The idea of the Discovery Chart Game, first introduced in Lesson Seven, was to make as many words as possible from the syllables in the Discovery Chart without using any syllable twice. In groups of four to six, the participants named words. One participant kept a list of words while another crossed out syllables as they were used. At the end of fifteen minutes the groups counted up the words they had made, and the group with the most words read its list to the class.

#### Coordinating Ear, Eye and Hand

Other activities were used to teach writing that were more along the lines of tests than games. In one of these activities, Visualize Words, the facilitator wrote a word on the blackboard and called on a participant to read it out loud. He asked everyone to look at the word carefully, erased it, and then asked the participants to write the word in their notebooks from memory. He then rewrote the word on the blackboard and the participants checked to see if they had written it correctly. The facilitator would then write several more words from the lesson in the same way.

Another test of mastering the writing system was dictation. Facilitators were encouraged to have regular dictations, starting from Lesson Four when the participants had already had a chance to develop their writing ability. Dictations were corrected in class by having different participants come to the blackboard and write one of the words or sentences

from their papers. Other members of the group checked to see if they had written the same thing or something different. In this way corrections were made by their peers.

### Teaching Comprehension

Because many beginning readers were getting bogged down in the process of decoding sounds and losing track of the meaning of what they were reading, staff looked for ways to encourage thinking and understanding. From the first lesson, when the participants practiced using the new syllables to read words, they were encouraged to think about the meaning of the words. After the small groups had each sent a representative to the front to conduct a repetition and drill exercise, the facilitator reviewed the words they had practiced and asked if anyone could tell what the word meant or could use it in a sentence. This part of the activity was especially useful for participants whose mother tongue was not Nepali.

The first short story appeared in Lesson Five. After the participants had read the story in small groups and had repeated it several times in chorus, the facilitator asked comprehension questions about the story. These were printed in the guidebook. Some of the comprehension questions were general in nature: "What's the title of the story?", "Who is it about?", "What happens in the story?", "Where does the story take place?" Others were more specific and related to the events of the story. As in the case of the poster discussion, questions were of different kinds, including identification, analysis, relating the story to the participants' own experience, empathy and evaluation.

### Writing and Comprehension

The oral comprehension questions did not necessarily involve all of the participants. Facilitators were cautioned about putting participants on the spot by singling them out to answer questions about the story, but they often did so. As everyone would have a chance to participate in a full class discussion, staff developed comprehension activities that could be worked on in small groups. These activities were grouped under the general title "Think and Write."

The first few activities of this kind came in the early lessons and consisted of writing the names of depicted objects. The pictures all showed things which the participants had read about, yet to identify an object by a precise word that uses syllables they had learned was not always easy. After all, an object might be called any number of names: Is it a house?, a roof?, thatch? The participants worked in small groups helping one another to identify the object and to write the answer in a box next to it.

More challenging than identifying a depicted object was the task of answering a question about a picture. These questions called for replies in the form of short sentences. For example, a picture showed an umbrella floating in a stream as a man looked on in surprise. The question was "Why



is Kancha surprised?" Answers could range from a brief "There's an umbrella in the water" to a full "Kancha's surprised because there's an umbrella in the water." Such exercises were given from Lesson Five, and again, the participants worked in small groups.

Such writing exercises called for creativity, as the answer was suggested by a picture and was not reproduced from any text. Later in the course, a more difficult creative writing activity was introduced. A scene from a story was illustrated as a comic strip frame, with one speaker asking a question or making a comment. The other character's speech bubble was blank so that it could be filled in by the participants who could consult the story for ideas, though the exact words would have to be their own. The participants discussed the exercise in small groups and helped each other with the task.

Starting with Lesson Ten, written comprehension questions were given about stories in the text. These were in addition to the oral comprehension questions described earlier. As in the other Think and Write activities, the participants worked on these questions in small groups. After the task was completed, one member from each group reported the answers they have come up with. Because the activity was difficult and time consuming, the written questions were usually answered on the day after the story was first studied. The questions were not subtle or tricky, with the answers coming directly from the reading passage, but this activity was found to be difficult. Answering the comprehension questions did not require as much imagination as the creative writing exercises, but it demanded a precise reading of the text.

## Comics

Since most of the syllables needed to write questions words were introduced in the first few lessons, staff found that they could write dialogues more easily than prose. There was a difference between the formal language of text, which needed to be autonomous and was bound by fairly elaborate rules of grammar and syntax, and the informal language of utterance, which could be incomplete and fragmentary. What the informal language of speech lacked in structure, it made up for in context.

Staff found, however, that the dialogue format was difficult for the participants to follow. They had trouble keeping track of who was saying what. For this reason, staff experimented with the idea of using a comic strip format to differentiate between two speakers in a dialogue and to put the dialogue into a more contextual setting. Early field testing with one simple comic showed that the participants both understood and enjoyed it. This experience encouraged staff to create more comics.

As they began to work with comics, staff found that they could create much more complex stories in this format than in simple prose. Prose required complete sentences that were logically connected. In the early lessons staff were often stymied because they did not have the syllables to write one or two important words, whereas in the comics they were able to get around many of these difficulties. A comparison of the themes of the text and the comic in the early lessons revealed that, whereas the stories were written at an elementary level, the comics were relatively sophisticated and provocative.

The comics were among the most elaborate of the learning materials, but also among the most popular. People of all educational levels were attracted to the literacy materials because of the comics.

The comics utilized a number of pictorial conventions that needed to be learned. In cultures where comic strips are widely read, these cues are learned through repeated exposure. In the Nepal program the conventions the staff thought would be most useful were taught as part of the materials.

Staff reported from the field that they felt the participants did not look at the pictures in the comics, but only at the words. This theory was tested, and this research found that although learners concentrated on the words, because they were more difficult, they saw and understood the pictures. This information was gathered by asking the participants to role play one of the comics. This was an extremely demanding request, as they were not used to "play acting" in front of a group. The role play took a long time, due to the participants' nervousness, but revealed that they could imitate not only the dialogue and action, but even the moods and facial expressions depicted in the comics. In fact, the role play was such a good learning experience that staff decided to retain it as a regular class activity.

In spite of finding that the participants could follow the pictorial cues, staff decided to introduce the notion of a comic strip in logical increments. This began with a four frame story without words (Figure 3). The participants studied the story in small groups, and then one member of each group reported what they had decided was going on in each frame. The objective of this activity was to show that a story could be told by pictures alone, with no words. The next day the participants returned to the same comic strip with the task of imagining what the people in each frame might be thinking or saying and then came up and role played the scenes. This activity took place as early as the sixth day of class.

FIGURE 3



### A Story without Words

The next step in building comic reading skills came in Lesson Three, when the first dialogue was introduced. The dialogue was fairly simple:

Where are you going, Uncle?  
To the fields.  
Where are you going, little girl?  
To have some food.  
What are you going to have?  
Bamboo shoots.  
What are you going to eat them on?  
A leaf.

In Nepal eating bamboo shoots on a leaf is not as unusual as it may sound. On the subsequent page there were two pictures showing a man and a little girl. There was a blank balloon near each figure, each with a little tail pointing at the person's mouth. In a Think and Write exercise the participants worked in small groups to decide what words each person might be saying, borrowing ideas from the dialogue on the previous page, and they wrote those words in the blank bubbles. In this way the participants learned the use of the comic bubble for conveying speech by creating their own dialogue. When they came to their first real comic, in Lesson Four, the bubbles needed no further explanation.

Figure 4



Where are you going,  
little girl?

To have some food.



What are you going  
to have?

Fish, Uncle.



Later, a more complicated comic strip was presented which had three kinds of comic bubbles, one to indicate speaking, another type to indicate thinking, and a third to indicate excitement or shouting. The three kinds of bubbles were introduced and demonstrated by the facilitator before the participants read the comic and the impersonal comic narration was introduced. Finally lines of motion were demonstrated and role played. These comic conventions were quickly picked up by the participants and they were able to act out the situations shown in the comic without difficulty.

Figure 5

There are some fish.



Hmm, there are some fish.

Hey, there are some fish here!

Starting with Lesson Nine a fairly complex story began which was carried over into the next two lessons. After that a five part series began. Both of these serialized stories dealt with social problems. Other comics toward the end of the literacy course treated health and economic themes.

Comics were particularly useful for new literates as they employed a conversational level of language. In addition, the pictorial cues provided a contextual setting which aided comprehension. Also, a combination of pictures and print was not as intimidating to the new literates as a page covered entirely with print. A few other agencies in Nepal started to produce post-literacy materials for adults in comic form. UNICEF and Save the Children used writers from the Ministry's program and the project artist to produce comics. UNICEF has encouraged a handful of other artists to try their hand at comics as well.

## CHAPTER SIX

### NUMERACY

"Every time we go into town we are cheated because we are illiterate. If I learn to read and write, I won't feel so helpless."

- A learner in a Ministry  
of Education literacy class.

Numeracy exercises were not included in the literacy materials until the fourth edition (1983-1984). The numeracy lessons were developed in response to requests from participants and with encouragement from the Ministry. With little documentation as guidance, except for a few elementary school textbooks, staff set about the task of teaching the four basic operations of addition, subtraction, multiplication and division, and the numbers up to one thousand. Some of the practical aspects of mathematics, such as linear measurement, area, weight and volume were left until the development of post-literacy materials. The objective in the basic literacy materials was simply to lay a foundation for understanding numbers and basic math functions.

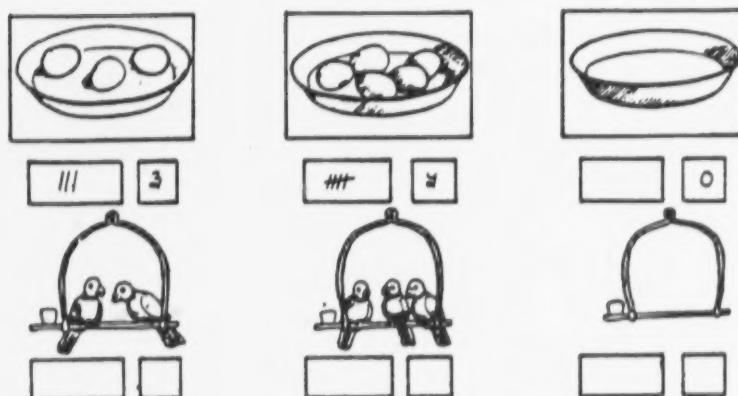
Staff realized early on that it would not be possible to provide the classes with concrete materials, such as beads, rods or blocks. As a result, they looked for activities and materials that could demonstrate concepts in a concrete manner and be duplicated by printing. The numeracy materials were field tested and revised twice. Feedback indicated that some of the initial exercises were too simple and others were too difficult. Major discrepancies were dealt with, but more testing and revision was needed to fine tune the numeracy materials and bring them up to the same standard as the literacy materials. The following sections highlight how key numeracy concepts and mathematical operations were introduced.

#### Tallying and the Numbers up to 10

The first number activity was introduced in Lesson One, where participants were taught how to count by tallying and how to group the tally marks in clusters of five. The class practiced tallying by having participants say how many brothers or daughters they had, for example. This same method of keeping track of a cumulative response was later used to keep score in the literacy games.

Although the lessons and pages in the literacy materials were numbered, the number signs were not explained until Lesson Six, when the numbers 1 through 5 were introduced. Although this was more than three weeks into the course, staff felt that the participants needed time to consolidate some of the basic principles of reading and writing before starting number work. Also, the first five lessons were filled with games and activities which tapered off with Lesson Six. In Lesson Seven the number signs for 6 through 10 were introduced and the concept of zero and its symbol were explained.

FIGURE 6

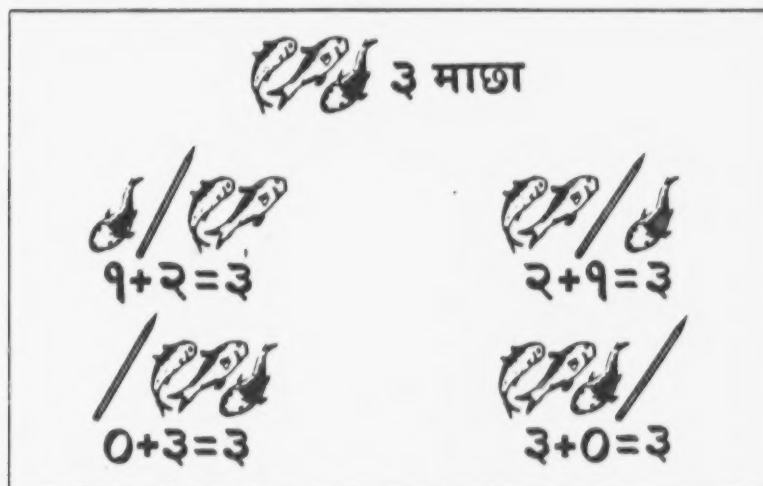


The project prepared a series of Number Charts (in the same format as the Discussion Poster Calendar and the Letter Charts) to help the facilitator introduce and review the numbers and the basic mathematical operations. After learning the numbers 1 through 10, the participants used the first page of the charts to review the number signs. The reverse of the chart, where the numbers appeared in random order, was used to "challenge" one another to read the number signs correctly.

### Addition of Numbers up to 10

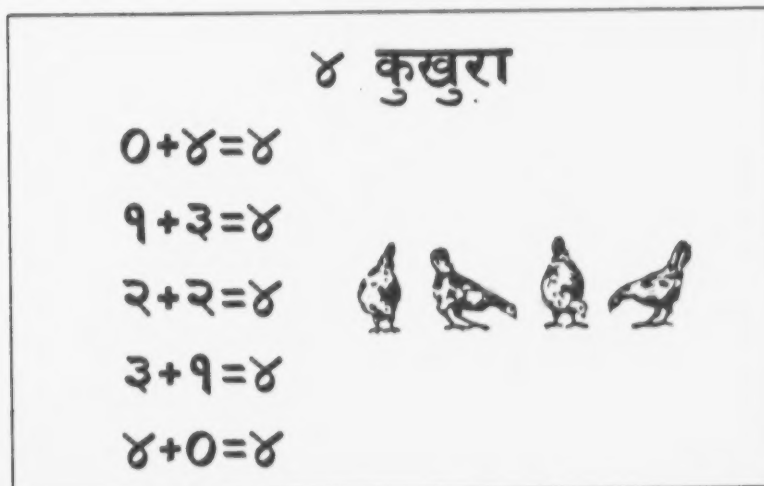
The first mathematical operation introduced was addition of numbers up to 10. This was done by partitioning sets. The Number Chart showed three fish separated into different subsets by a pencil drawn on the poster itself (Figure 7). Below each partitioned set was a formula, such as "1 + 2 = 3". Pointing to each of the pictures in turn, the facilitator read the formulas (For example, "One plus two equals three"). This page of the Number Chart was used to introduce the concept of addition.

FIGURE 7



On the next page of the Number Chart was a picture of four chickens, with a series of equations. This page of the chart was used to check that participants had understood the concept. Participants were asked to come to the front individually and, as the facilitator pointed to one of the number equations, place their pencils between the chickens at the spot indicated by the formula (Figure 8).

FIGURE 8





During the next few classes the participants worked in small groups, assisting one another to partition sets of 5 and 6 objects, 7 and 8 objects and 9 and 10 objects. These activities were done in their workbooks. The final step in this series was the introduction of vertical addition.

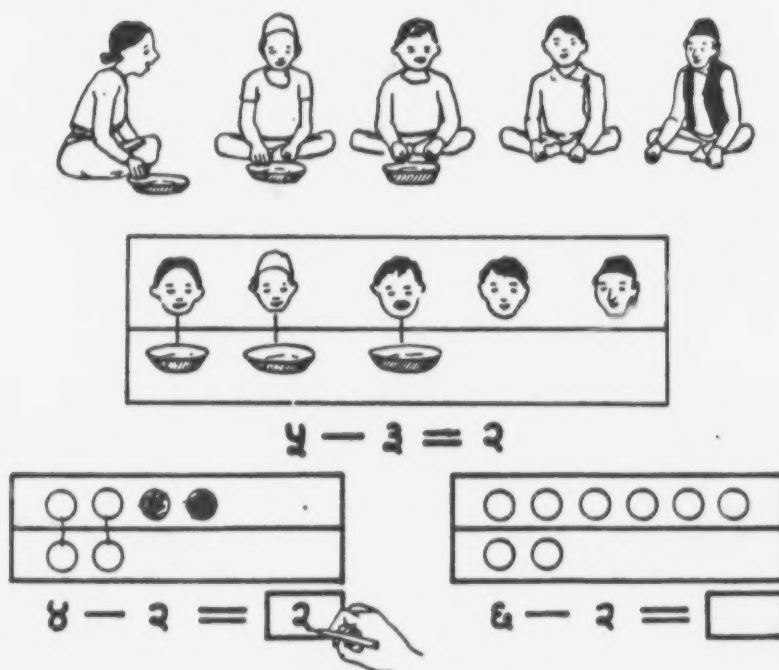
### Subtraction of Numbers up to 10

The next operation covered was subtraction of numbers up to 10 and was introduced by comparing sets. The introduction included four steps, the first of which was a real situation. In the first step, the facilitator called five participants to the front. Holding up three pencils he asked the class, "How many pencils do I have?" and "How many participants are up front here?" Giving one pencil each to three of the five participants the facilitator asked, "How many participants have pencils?" and "How many don't?"

In the second step, the situation was illustrated with a diagram on the blackboard. The facilitator drew five circles to represent the five participants and below them three lines to represent the pencils. Drawing lines to connect the three "pencils" to three of the "participants" the facilitator said, "Three participants got pencils." Filling in the remaining two circles with chalk the facilitator said, "These two did not."

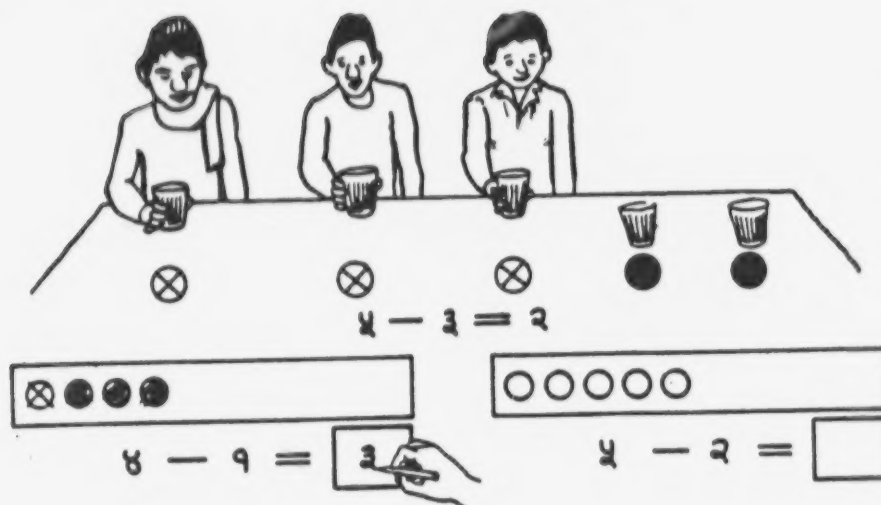
In the third step, the facilitator went on to explain that this situation can be written in numbers. Writing " $5 - 3 = 2$ " on the blackboard the facilitator noted, "The difference between five and three is two." After practicing this pattern several times with different situations the class was divided into small groups to work on problems in their books, and this constituted the fourth step. Figure 9 shows a page from the book.

FIGURE 9



In a subsequent lesson subtraction was treated as "taking away." The same four steps were used to introduce the concept, beginning with a real situation which was then illustrated with a blackboard diagram. The situation was written as an equation which was expressed in words, such as, "Five, take away three, is two." (See Figure 10)

FIGURE 10



Once the basic operations of addition and subtraction were understood, the relationship between the two was practiced. Participants were encouraged to use pebbles, beans or kernels of corn to help solve simple addition and subtraction problems until they understood the concepts and could work with just the numbers.

## Number Games

A card game called Number Rummy (Addition) gave the participants practice adding the numbers up to 10. The game was played with 60 cards, each card containing a number 0 through 10. There were six cards each bearing the numbers 1,2,3,4,5 and 6; five cards each with the numbers 0,7,8 and 9, and four cards with the number 10. Each player started with two cards which were placed face up on the playing surface, usually a floor or a mat. The remaining cards made up the draw pile and were placed in the center of the group. The object of the game was to put together sets of 3 cards, any two of which would add up to the third. For example, if a player had a 2 and a 3, either a 5 would complete the set (because  $2 + 3 = 5$ ) or a 1 would complete it (because  $2 + 1 = 3$ ). During his turn, a player might steal one of the cards in front of any of the other players in order to complete a set, or he might take a card from the draw pile. When a set was completed, the cards were turned over, and the player waited until his next turn before drawing a new card from the pile in the middle. Only one card would be drawn during each turn so that other players were given a chance to make sets.

Another game played with the same set of cards, Number Rummy (Subtraction), provided practice in finding the difference between numbers up to ten. The cards were spread out in a pile face down in the middle of the group. Each player in turn drew two cards and said what the difference was between them. Each player kept the cards he drew in a little pile. If he drew two cards of the same number (the difference between them is zero), he protected all the cards he had drawn up to that point and put them to one side. But if a player drew two cards that have a difference of one, he had to return all his unprotected cards face down in the middle of the players.

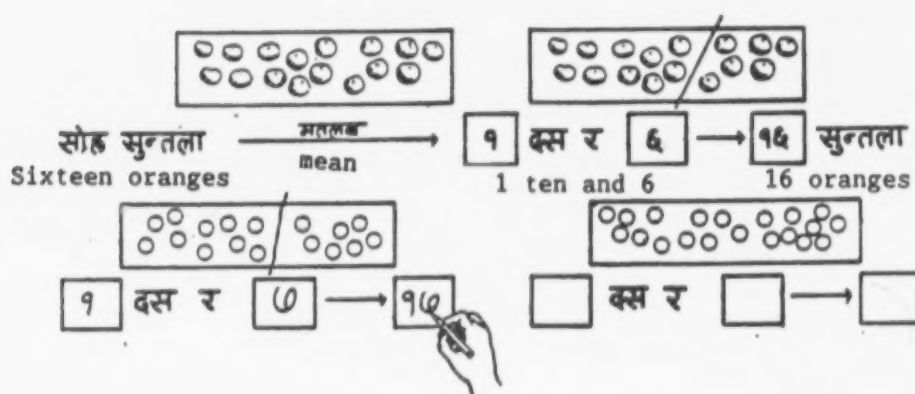
The purpose of the games was to practice addition and subtraction with different combinations of numbers up to 10. The rules for each game added suspense and excitement and made the number drill fun. The games were made up through a process of trial and error, with the rules being modified until staff came up with a game that was easy to learn, that provided practice in consolidating number skills and that was fun to play. Similar games were played to practice adding and subtracting numbers up to 20 by doubling the size of the set to include cards with numbers 11 through 20.

## Two-Digit Numbers

In some basic literacy courses, the reading and numeracy segments were presented in separate books. In the Nepal materials the two were integrated in such a way that each lesson contained both literacy and numeracy activities. As literacy skills increased more of the math concepts could be presented in written form. The numeracy sections were prepared with consideration for the syllables that the participants had learned. For example, one of the words needed to introduce two-digit numbers was the word "ten." One of the letters in this word was not introduced until Lesson Eleven, and this determined when tens as units and the concept of place value could be introduced.

Handfuls of pebbles or beans were used to introduce the idea of tens and units. In small groups the participants separated the beans into piles of ten and then said how many piles of ten they had and how many were left over. The facilitator showed on the blackboard how to write the number. If there were none left over, the units place was filled with a zero. The participants, still in groups, then practiced working on exercises in their books. Figure 11 is an example.

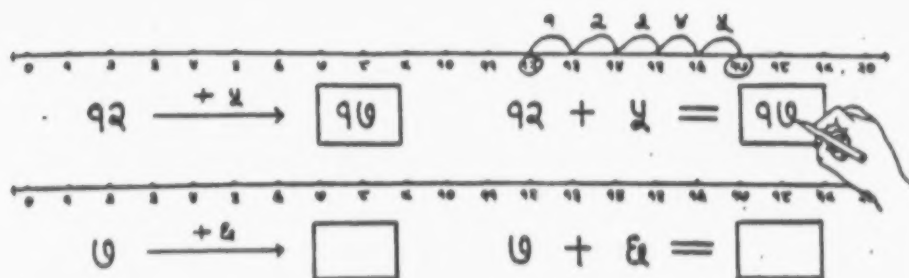
FIGURE 11



#### Addition and Subtraction to Twenty

The next operations introduced were addition and subtraction with numbers up to twenty. In order to assist the participants in visualizing these operations, the number line was introduced. (Figure 12).

FIGURE 12



Number lines turned out to be very difficult for the facilitators to use, and they frequently reported that they did not understand them. It was felt that this was not because the technique itself was difficult, but because the facilitators had never been exposed to it. As in the case of using keywords to introduce the letters, this and several other methods for introducing math operations met with initial resistance.

Even though number lines were printed at the top of many of the addition and subtraction exercises, participants were seen counting on their fingers or drawing marks on the edges of their paper to help them count. This was because the facilitators had not taught them how to use the number lines. The problem was felt to be one of facilitator training rather than of the method. In addition to number lines, the participants were encouraged to use beans or pebbles to help them solve the problems in their books, but many of the facilitators were also reluctant to try this method.

### Multiplication with Numbers up to Twenty

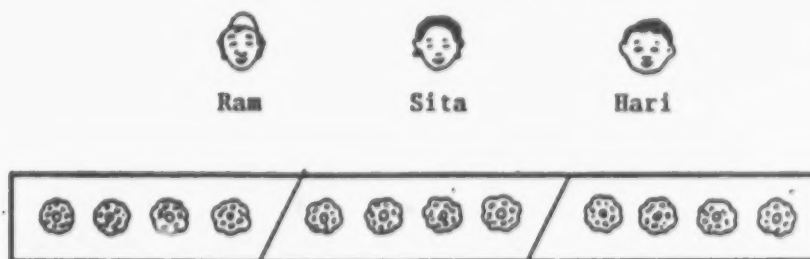
Just as addition had been introduced by partitioning sets, the concept of sets was used to introduce multiplication. For example: "Three sets of two chicks make six chicks." This idea was expressed in numbers ( $2 \times 3 = 6$ ) and in words ("Two times three is six"). With the help of the Number Charts, practice was provided for translating pictured situations into mathematical formulas and vice versa, after which the participants helped one another complete similar exercises in their books.

### Division with Numbers up to Twenty

Division with numbers up to twenty was introduced using the idea of sharing. In the first series of examples the number of sets was known and the problem was to find out how many items each set contained. The concept was introduced with the following situation:

FIGURE 13

Ram, Sita and Hari bought 12 sweets in a shop. Hari said,  
"Let's each have the same, okay?"



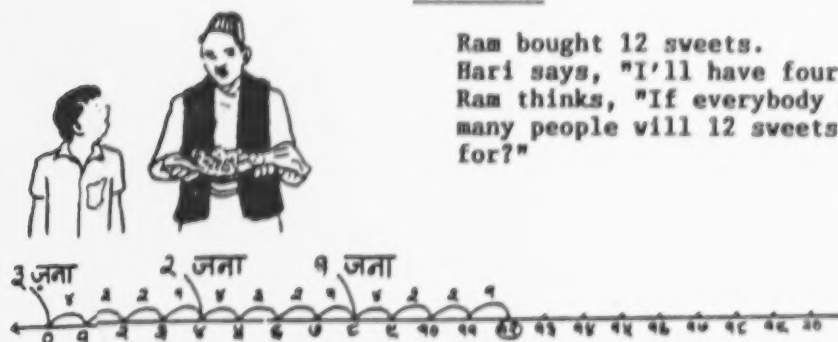
If 12 sweets are divided into 3 equal sets, there will be 4 sweets in each set.

$$12/3 = 4 \text{ because } 4 \times 3 = 12$$



In a second series of examples the number of items in each set was known and the problem was to figure out how many sets could be made. A number line was used to solve this problem.

FIGURE 14



Starting at 12, participants counted back 4 and made a mark to indicate one person. They counted back another 4 and indicated a second person. Counting back 4 more, they found there were no sweets left. There was only enough for three people.

#### Addition and Subtraction of Two-Digit Numbers

Addition of two-digit numbers was introduced in the following sequence: addition of tens; addition of two-digit numbers and one-digit numbers without carry over; addition of two-digit numbers without carry over; addition of two-digit numbers and one-digit numbers with carry over; and the addition of two-digit numbers with carry over.

#### Multiplication and Division with Two-Digit Numbers

The participants' books contained several exercises for creating and practicing multiplication tables. Often, their skills in multiplication did not become sufficiently consolidated for them to easily handle multiplication and division with numbers over twenty. This was one time when rote memory might have been useful. The participants continually had to struggle and count on their fingers. While they became fairly adept at addition and subtraction, their competence in multiplication and division remained weak.

The first step was to introduce the idea that equal sets may be added or partitioned when multiplying. Subsequent steps were as follows: two-digit numbers multiplied by one-digit numbers; multiplying in one's head; and multiplication of two-digit numbers. Finally, simple division without a remainder, the algebraic relationships "greater than" and "less than", and simple division with a remainder were introduced. Without a firm grounding in the multiplication tables, these operations proved to be difficult for the participants.

## CHAPTER SEVEN

### THE FACILITATOR GUIDEBOOK AND FACILITATOR TRAINING

"I'm the only person in my family who can read, and when I was in India for a few months, my mother had to borrow money from the money lender. Usually they charge just 5% per month, but because she couldn't read she put her thumbprint to a contract to pay 10% per month. My mother is one of my students."

- A teacher in a Ministry  
of Education literacy class

In keeping with the principles of grass-roots development, the project encouraged each community to rely on its own resources, including its human resources. Local people have a better knowledge of the history, problems and dynamics of a community than outsiders and are also more likely to be committed to helping their neighbors.

The decision to use people from each community as facilitators imposed several limitations on staff recruitment. Since the facilitators had to be minimally literate, there were often few candidates from which to choose. Qualified women were especially difficult to find. In many villages the only literate people were primary school teachers or youths who had recently completed or dropped out of school. Each of these groups had its own limitations. School teachers were often not familiar with and, as a result, resistant to participatory techniques. They tended to slip back into rote teaching methods. As for the newly literate youths, there were a few cases when adults actually warned project staff that they would not accept them as teachers because school had "spoiled" them. Their limited education had often distanced them from the rest of the community, and in some cases, the young age of a facilitator posed a barrier. As in most traditional societies, Nepalese adults occupy positions of status and respect, and younger members of the community are expected to defer to their elders. Some adults would have felt uncomfortable being taught by village youth who, in all other respects, were their "juniors." This combination of factors meant that in many cases partially literate adults would have to serve as facilitators. The level of skill of the potential facilitator had important implications for the design of the program's facilitator guidebook and training.

This chapter examines the process involved in the development of the Facilitator Guidebook. The discussion focuses on the general training program for facilitators which evolved over the eight year project period, much as the curriculum did. In its initial stages the approach to training village literacy facilitators concentrated on providing them with technical information appropriate for rural development. Later, emphasis was given to developing the interpersonal skills that characterize a good facilitator. At a subsequent stage detailed lesson plans for literacy instruction were introduced. Finally, aspects of all these approaches were pulled together into a design that integrated educational principles with specific literacy and numeracy teaching activities.

### The Facilitator as a Catalyst for Community Development

During the first stages of the nonformal education program, and before the emphasis turned to literacy, the objective of the training was to give facilitators the technical skills they would need to become a catalyst for community development. With this in mind, project staff prepared pictures and stories on a variety of development themes. Each lesson plan was written in detail, with objectives, a description of the learning materials, and procedures for conducting the lesson. A preliminary facilitator's guidebook was produced by grouping the different lessons under topical headings, such as health, education, agriculture, water problems, and social problems. An introduction to each section provided some technical background. Finally, a section was included that described the goals and philosophy of the program and provided guidelines for conducting the group sessions.

This earliest guidebook contained a number of serious flaws. There was no overall plan to the book. It was a "catch-all" from which the facilitator was expected to pick and choose activities that would address needs as they came up in group discussions. The most serious problem was that there was far too much written text. The facilitators were simply not able to digest the material in the way it was presented. They could use the learning materials as they had been trained to, but the guidebook itself was too difficult. It was often put on a shelf and the technical information it contained remained inaccessible to most facilitators involved in the nonformal education program.

### A Focus on Interpersonal Skills

The outline of a more realistic approach was worked out during a consultant's visit in late 1979. In revising the guidebook, project staff began by making a list of what they felt the facilitators needed to know. This included the following four sections.

#### 1. Setting the tone of the group sessions:

how to create a relaxed atmosphere, and  
how to relate to others as equals.

2. Acting as a catalyst for community development:

how to get others to speak, think, plan and act for themselves; and

how to use different materials to increase motivation, encourage new ideas, promote critical thinking, plan, and impart technical knowledge.

3. Guiding the discussion:

how to initiate discussion,  
how to ask questions,  
how to listen,  
how to help less vocal members of the group to participate,  
how to guide the session without imposing solutions, and  
how to handle questions to which the facilitator does not know the answer.

4. Evaluation:

how to keep track of what the participants say, feel, and do; and  
how to evaluate the results.

To help the facilitators create a relaxed atmosphere, a significant portion of the ten-day training program was devoted to developing ice-breakers and warm-up exercises. Socio-dramas were used for this purpose as well as other materials such as puppets and flexiflans.

In order to prepare facilitators to play the role of catalysts for community development, the training focus was redirected from providing the facilitators with technical information to giving them process skills that would enable them to conduct the classes in a more participatory manner. In particular, attention was given to training the facilitators to use the different materials for creative, analytical, planning and didactic purposes.

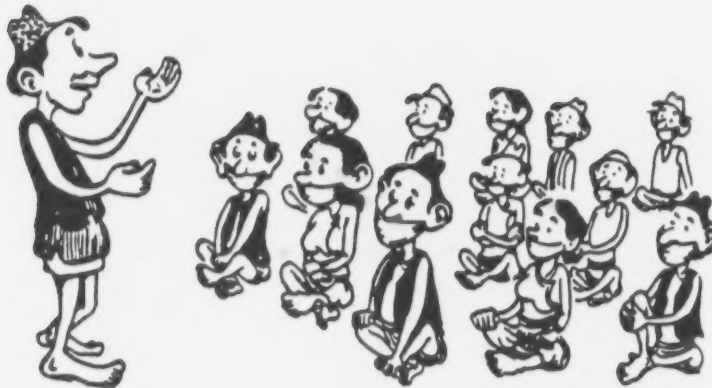
To help guide the group discussion, the training program included skills such as how to ask questions and how to listen to participants identify their felt needs. As discussion leaders, the facilitators had to be trained to guard against lecturing or criticizing and to be careful not

to impose their own opinions on the group. The facilitator's job was seen as encouraging participants to act for themselves, not to be their spokesperson.

This redirection of effort and classification of tasks resulted in the development of a revised guidebook which focused on interpersonal skills and ways to conduct the class. In light of the difficulties experienced earlier with too much written text, the revised guidebook contained much less text. The main themes of the facilitator training program were summarized in cartoon pictures with simple captions (Figures 15 and 16). This format turned out to be more attractive to the facilitators and encouraged them to actively use the guidebook and share it with others. The guidebook served in an entertaining way to remind the trainees about the characteristics of a good facilitator, the different ways the materials could be used to stimulate discussion and raise awareness, and the various responsibilities that the facilitator was expected to carry out. It also reviewed the main principles of nonformal education. The revised guidebook became very popular with both facilitators and people outside of the program. It gave readers a flavor of what nonformal education was all about.



FIGURE 15



"The facilitator should not do all the talking himself."



"By using the flexiflans the participants  
can express what is on their minds."

FIGURE 16



"A participant's idea is like a tender flower.  
Just as water helps a flower to grow, appreciation  
will help the participant's idea to grow."



"Just as a harsh, hot wind can kill a flower,  
criticism can kill a participant's idea."

### Teaching with Lesson Plans

At the same time the focus of the program shifted to literacy, several other changes occurred which necessitated a number of important modifications in the training of facilitators. When the program came under the jurisdiction of the Ministry, it grew rapidly from less than a hundred learning groups a year to over 700. Project staff were no longer able to visit villages before launching a program in order to interview prospective facilitators. The selection of villages and of facilitators was given over to the District Education Offices which worked through their own district-wide network of schools. As a result, 90% of the adult education facilitators in the expanded program were drawn from the ranks of primary school teachers.

With a predominantly literate pool of trainees coming from the formal education sector, the program's training needs changed significantly. A large part of the task became that of finding ways to "un-train" the school teachers with respect to traditional classroom practices and provide them with new, nonformal education skills. At the same time, provisions had to be made for the facilitators who were not teachers by profession and who needed specific guidelines for teaching the literacy classes.

As explained earlier, literacy materials had been designed with specific teaching activities in mind and detailed lesson plans were drawn up accordingly. These plans not only explained what the facilitator was expected to do, but also what participants were to do during each activity. The lesson plans reflected many new ideas that had been incorporated in the program, such as small group work and games. The way the activities were conducted was a vital part of the program's design, as the overall procedures were intended to create a structure that would encourage participation and thus change the role of the facilitator. To the extent that the participants could be "protected" from traditional primary school methods, they might be encouraged to read by analyzing the written symbols and decoding the words phonetically. The facilitator's task was to introduce new material, explain the rules of the games, and test for understanding. Reading, writing, drill, and math problem solving, would be carried out in small groups with peer assistance, thus ensuring that the participants would be taking primary responsibility for their own learning.

### Weaknesses in the Lesson Plans

Because the teaching activities and techniques were so specific, the lesson plans were fairly complicated, even for school teachers. Each activity had its own particular procedure. With regard to forming small groups, for example, the guidebook had this to say:

The purpose of breaking the class into small groups is to give everyone a chance to participate in the activity. Small groups are of two different kinds, however, and each serves a different purpose.

Small Groups for Poster Discussion: A problem that sometimes occurs when the whole class is discussing a subject is that certain participants are more talkative, and the shy ones don't get a chance to speak. In forming groups for poster discussion, care should be taken that one or two people don't dominate the groups. It is a good idea to put talkative people together in groups and shy people together in other groups. In this way everyone will have a chance to participate in the discussion.

Small Groups for Peer Teaching: In peer teaching the participants assisted one another. In this activity the fast learners assisted the slower ones. This gave the fast learners an important responsibility and it also allowed the slow learners to get individual attention. In forming groups for peer teaching it was important to see that each group has at least one participant who knew the material well enough to be able to help the others.

Although this level of detail might be useful for experienced adult educators, staff found that it complicated class procedures unnecessarily for program facilitators. As in the case of the first guidebook, many of the facilitators were discouraged from using the book once the training program was finished, as it contained too much information. Once back in their villages the facilitators relied on what they had learned during training to guide them in conducting class activities.

After using the lesson plans for a year, classroom techniques were found to be working well, but the guidebook needed to be simplified. For example, it was found that the concept of dividing the class into small groups was important but it was not necessary to be specific about the size or composition of the groups. If the facilitators would simply use small groups, a significant step would be taken in making participatory learning a part of the program.

At the same time, once the literacy materials became available in book form, a number of non-governmental organizations (NGOs) began using them. The Ministry of Education made the materials available to these organizations at cost. Most NGOs did not recruit school teachers to run the classes, and this was another reason to produce a guidebook that would be suitable for individuals with a wide range of educational background. A "package" of training procedures was needed to compliment the learning materials so that they would be more accessible. Staff decided to streamline the guidebook and develop something that would give more concrete skills than our pictorial guidebook and yet be easier to use than the detailed lesson plans.

### Creating a "User Friendly" Guidebook

The major part of World Education's technical assistance in 1985-1986 was devoted to testing and revising a new guidebook and training design. The new materials and procedures were pilot tested in the spring of 1985, revised and re-tested in the summer, and published and implemented on a nationwide scale in the winter of 1985-86. The following sections describe the new Facilitator Guidebook and its intended use.

Instead of individualized plans for each activity, basic teaching and learning strategies were identified which could be applied across the entire curriculum. Staff realized that it would not be possible to "teacher proof" the literacy materials, but at the same time they felt that a suitable structure could be developed that would be simple yet ensure active participation on the part of the learners by incorporating the basic educational methods of discussion, analysis, reading for comprehension, and self-directed learning.

Through an analysis of all of the activities included in the guidebook, four basic types of educational or teaching methods were identified: Introducing, Peer Teaching, Playing Games, and Testing. In Introducing and Testing the facilitator played the major role. In Peer Teaching and Playing Games the participants took primary responsibility. For each method a logo was created so that the facilitator would know at a glance what method was used for each activity in the day's lesson plan. The division was along procedural lines rather than according to content. Each method could be utilized to achieve a wide variety of learning objectives, but primary responsibility for the activity and how it was conducted alternated between facilitator and participant. In two of the methods the facilitator took the lead, and in the other two the participants played the major role.

The facilitator, as the literacy "expert" and resource person, had the task of introducing new information and explaining those things that were not self-evident to the participants. The literacy books determined the sequence of instruction, but the facilitator had the responsibility for adjusting the pace of learning and for making sure the participants understood the material before moving on. The facilitators were expected to use their own discretion in repeating activities when they felt the participants needed further practice. Although the lesson plans in the guidebook suggested particular activities to be covered each day, few learning groups actually kept pace with the recommended schedule.

The participants, as learners, had the task of understanding and mastering the literacy and numeracy skills being taught. There was also a "hidden" curriculum which had the objectives of building the learners' confidence, increasing their analytical skills, giving them opportunities to discuss issues of concern, demonstrating that they can learn from one another, and motivating them to read for both learning and pleasure. The hidden curriculum was not overtly taught but was incorporated into the program design.



Detailed lesson plans were provided in the guidebook for fifty sessions. These covered all of Book One of the series, or the first ten lessons out of a course total of twenty-five. There were 250 individual activities presented in these fifty daily lesson plans, or roughly five activities per class. Each activity was repeated anywhere from two to thirty-six times, so that there were only twenty-nine different activities throughout the course. This greatly reduced the number of separate procedures that the facilitator had to learn. Furthermore, since each activity was taught according to one of the four teaching methods, the facilitator always had a general orientation to the purpose of the activity and how it was to be conducted.

The ten lessons were not of equal length, but they followed a uniform pattern which helped the facilitator gain confidence as the program continued. The lesson plans were designed so that each class had a mixture of methods and activities. In the following sections individual activities under each of the four teaching methods are described in greater detail.

Introducing: In the activities designated as "Introducing" the facilitator provided the participants with new information or demonstrated a new procedure. For this reason, these activities were elaborated in the guidebook in some detail. There were seven types of activities that fell under this method, with each one following more or less the same format whenever repeated.

1. **Introduce the Keyword and the Discovery Chart.** Depending on the material being presented in each lesson, there were a number of variations on this activity, such as Introduce the Keyword and Conjunct Letters or Introduce the Keyword and New Letters. This activity occurred on the first day of each lesson and was used to acquaint the participants with new elements of the writing system. It consisted of three steps:

- o introducing the keyword, either with the Syllable Cards or the Letter Charts;
- o breaking up the keyword, which consists of separating the word into its constituent syllables; and
- o combining the new elements with syllables learned previously. In the first four lessons this is done by using the Syllable Cards to make the Discovery Chart -- the complete repertoire of syllables learned up to a given point. The Discovery Chart eventually grew to such dimensions that to present it in its entirety became cumbersome and time consuming. Thereafter the Number Charts were used to present only the new elements of the Discovery Chart.

2. **Introduce Conjunct Syllables.** Conjunct letters are consonant clusters. They were introduced on the blackboard and reproduced in the literacy books in the form of simple addition equations.

3. **Introduce Punctuation.** Punctuation marks were introduced on five occasions in the first book. The punctuation marks presented included the period (or full stop), the question mark, the "halanta" which is a short diagonal line that indicates the inherent short "a" vowel is not pronounced, the comma, and the exclamation point. Along with the exclamation point three kinds of balloons for comic dialogue were also taught: a smooth oval balloon to signify ordinary speech, a jagged one to indicate shouting or excitement, and a "cloudy" one to represent thinking.

4. **Teach Writing.** This activity was used at first to practice drawing shapes. Later the facilitator showed the participants how to write letters, words, conjunct syllables and numbers. The facilitator used the blackboard to teach writing, while the participants copied the shapes or letters in their notebooks.

5. **Introduce Numbers.** In the first lesson the facilitator showed the participants how to count by tallying and how to arrange the tally marks in groups of five. Later the numerals 1 through 10 and 0 were introduced. The blackboard was used to teach the participants how to write the numerals.

6. **Introduce Math Operations.** The four math operations introduced in Book One were: adding numbers up to ten by partitioning sets; vertical addition; subtracting numbers up to ten by comparing sets; and subtracting by "taking away".

7. **Tell a Story.** This activity was not strictly part of the literacy or numeracy curriculum, but was offered as a learning material to stimulate thinking and discussion and to help the participants clarify values. It was included under the "Introducing" method simply because the facilitator, as the story teller, took the primary role. The stories related to the theme of the keyword and began with the keyword "poverty" in Lesson Seven.

Peer Teaching: Peer teaching was the most frequently used of the four teaching methods, and as such was a major element in the literacy program. This was where much of the learning took place. Peer Teaching activities were all characterized by a three-step process.

1. **Forming groups.** The facilitator divided the participants into small groups of three to five and explained the task that they were to do. These tasks included a diverse range of activities, such as discussing pictures, reading, number work, problem solving and preparing for a role play.

2. **Reporting.** In this part of the activity each group selected one or more representatives to come to the front of the class to report what the group discussed or to make a presentation.

3. **Questioning.** The facilitator encouraged the class to discuss the activity by asking general questions. Sample questions were printed in the guidebook.

Peer Teaching activities were designed to encourage active thinking, participation and interaction among the participants. They provided a structure which maximized the chances for self-directed learning and minimized the role of the facilitator. There were seven types of activities that fell under the category of Peer Teaching.

1. **Poster Discussion.** Each new lesson began with a discussion of a picture. The picture set the theme of the lesson and provided a context for introducing the keyword.

2. **Reading.** Simple reading practice was the most frequently repeated activity in the program. Almost all of the reading exercises in the literacy program were done as a Peer Teaching activity. Once the letters were produced, the participants worked in small groups to help each other read syllables, words, phrases and sentences. After the small groups practiced, one representative from each group came to the front and lead the class in oral repetition.

3. **Read a Comic.** This was a variation of the reading activity described above. Comics offer a rich context for conveying complex meanings with only a few words. Under the section on "Questioning" the guidebook gave comprehension questions about the comic for the class to discuss.

4. **Read a Story.** This activity was conducted in a similar manner as Read a Comic. By the end of Lesson Four, the participants had enough understanding of the writing system to read a simple story of about a dozen short sentences. In the early lessons, however, the comics were more complex and interesting than the stories.

5. **Role Play.** Role plays were based on the comics in the literacy books. The comics provided the script while the role plays offered a chance to review the reading material and at the same time encouraged the participants to examine the actions and emotions shown in the pictures. Although participants were often self-conscious about acting out the more dramatic elements of the comics, even a fairly stilted rendition provided the class with lots of entertainment and helped participants overcome their shyness. The comic script provided a structure and offered support in carrying out an unfamiliar task.

6. **Create a Socio-Drama.** While this activity did not relate directly to the literacy objectives of the materials, it was designed to stimulate thinking, creativity and confidence. It also encouraged participants to review the important themes of the lesson. Participants were asked to look back at the discussion poster for the lesson and create a short skit, based on their own experience, that illustrated one of the themes suggested by the picture. Before attempting this activity the participants had already had several chances to experience role playing based on comic scripts.

7. **Think and Write.** This activity was the most diverse activity in the program. It was used for different kinds of problem solving and creative writing practice. It encompassed, for example, identifying pictured objects, filling in blank comic balloons, answering questions about pictured situations, writing comprehension questions about stories, and doing crossword puzzles. It was also used for practicing different numeracy activities such as tallying, partitioning sets, and carrying out other mathematical operations. Working in small groups to carry out these tasks created an atmosphere of safety and encouraged cooperation.

Playing Games: In the Nepal program, games provided opportunities for drill in a way that participants could interact, assist one another, and at the same time have fun. The games presented the syllables or numbers in random order, so that mindless sing-song repetition was avoided. Participants decoded the symbols and used their imaginations in order to find opportunities to play successfully.

There are ten different games used which can be grouped into two basic types. The first type was played with syllable cards on the blackboard, in the participants' books, or with the Letter and Number Charts. These games were adapted to many different lessons and were played throughout the course. The second type required a specially designed set of playing cards. They were geared to specific lessons, and were played only a few times. Though these games were explained earlier in the text, they are presented briefly here to provide an inventory in one place.

1. **Play the Game "Challenge."** This game was used primarily to consolidate the new syllable families introduced by the keywords, but was also used to practice conjunct syllables, numbers, and addition and subtraction problems with numbers up to 10. The rules of this and all the games were given in detail the first time the game was played. Thereafter, the rules were given in condensed form.

2. **Play the Game "Dictation."** This game was designed to provide writing practice. It was first played with the syllable cards and later by writing on the blackboard. The class was actively involved as they "dictated" words which a participant at the front of the class was to write.

3. **Play the Game "Word Chain."** This was another game designed to provide practice with writing. Like the Dictation Game, it was played first with the syllable cards and later on the blackboard. Participants at the front of the group who were making the words had the support of teams to help them find appropriate words and to help them with spelling.

4. **Play the Discovery Chart Game.** This game utilized the Discovery Charts printed in the literacy books. The Discovery Charts included all of the syllables and their families that had been learned up to that lesson. They were printed in their entirety up through Lesson Thirteen in Book Two, at which point there were 19 consonants each with 9 vowel signs, making a

total of 171 syllables. From that point on, the amount of information became too cumbersome to make playing the game or reproducing the Discovery Charts practical.

The remaining six games used a limited set of syllable or number cards and were therefore restricted to use in specific lessons.

5. **Play the Game "Match Letters."** This was a "concentration" game played in Lesson Two to familiarize the participants with the twelve syllables introduced up to that point. Each class was provided with four sets of the game so that approximately twenty-four participants could play at one time.

6. **Play the Game "Make Words."** This was another "concentration" game used in Lessons Three and Four to familiarize the learners with how to combine syllables to make words.

7. **Play the Syllable Card Game.** This was a team game and was played in Lessons Four, Five and Six. It utilized the same syllable cards which were previously used to make the keywords and the Discovery Charts in the first four lessons.

8. **Play the Game "Letter Rummy."** This game uses a set of sixty playing cards. The game is played in Lessons Six and Seven and, like the Make Words concentration game, gives practice using syllables to make words. Each class is provided with four sets of cards.

9. **Play the Game "Number Rummy" (Addition).** A similar set of sixty cards, but this time containing numbers, was provided to play the Number Rummy games. The purpose of this first number game was to increase the participants' familiarity with addition combinations up to the sum of 10.

10. **Play the Game "Number Rummy" (Subtraction).** This game uses the same set of number cards as the previous game; only the rules are changed. The objective is to give practice finding the difference between all combinations of numbers up to 10.

Testing: In these activities the facilitator checked to see that the participants had understood the material being presented or had mastered the new skills. There were five types of activities that fell under the category of Testing.

1. **Testing Retention.** This was a review activity and was used by the facilitator to determine whether the participants had mastered the materials just covered or whether they needed more practice before moving on to new material.

2. **Testing Understanding.** This activity immediately followed the introduction of a new concept that might pose difficulty. The facilitator introduced the material and then checked to see that the participants had understood it by asking them to demonstrate the activity on the blackboard.



In particular, this activity was used to check that math operations had been understood. It was also used when the concept and examples of conjunct letters were first introduced.

3. **Visualize Words.** This activity provided writing practice at a level that was somewhat more difficult than copying but less demanding than oral dictation.

4. **Dictation Test.** At the end of each lesson the facilitator gave a dictation from material in the lesson. This was a check to see how well the participants had mastered the writing skills included in a specific lesson as well as new skills covered in previous lessons.

5. **Review.** At the end of each lesson the facilitator had the participants review the important material that had been covered.

### The Training Program

The Facilitator's Guidebook was 112 pages in length. It was the same size and printed on the same kind of newsprint as the literacy books which participants use. Detailed lesson plans were provided for only the first ten lessons. The Guidebook was an extension of the facilitators' initial training program. By the time the facilitator had taught the first ten lessons, he had usually gained enough experience in the teaching techniques to be able to teach the rest of the literacy course with confidence.

The early training designs for facilitators grew out of the program's initial objectives. The first seven-day training program contained a mix of development content and facilitation skills. From observation of facilitators in the field, staff discovered that the facilitators were ill-equipped to play the "technical consultant" role which had been envisaged. Staff realized that they could not undo years of formal school experience with just a few days training. The idea of turning ordinary villagers into catalysts for community development seemed to be too broad and imprecise to be a realistic training objective.

Rather than try to prepare the facilitators for a role they would have difficulty fulfilling, it was decided that a more practical plan was needed to provide facilitators with a set of specific skills and techniques that would help them become more effective educators. A first task was to find out what skills the facilitator trainees could realistically be expected to learn in a limited period of time. With this in mind, staff revised the training program to focus more on interpersonal skills and ways to use the program's learning materials to generate discussion, create awareness, encourage analysis and promote action planning.

A large portion of the revised ten-day training schedule was oriented toward facilitation processes. The trainees experimented with different ways to create a relaxed classroom atmosphere, and they invented their own warm-up activities with puppets. They learned how to use the project's literacy materials and games to stimulate creativity and analysis. They

practiced questioning skills and they learned to look for felt needs in the group discussions that followed. They were also shown how to record and keep track of plans and decisions made by the participants in the learning groups.

The rest of the training program was devoted to specialized content areas such as health, agriculture, and literacy. The facilitators worked in teams to develop their own lesson plans and presented them either to the group or to local villagers in the evenings. During the last few days, the training dealt at a more theoretical level with the role of the facilitator and the philosophy of nonformal education.

Ten days was found to be too short a time for the trainees to develop even the limited process skills that had been envisioned. The teaching techniques to which they were exposed were very different from anything they had experienced in their own education. They could repeat specific tasks that they had learned during training, but it was difficult for them to generalize principles and apply them to new situations. It was difficult for them to prepare lesson plans on specific topics other than those that had been taught during the training program. Facilitator trainees had trouble analyzing the discussions and bringing out the felt needs voiced by the group.

### Training for Literacy

With the move to the Ministry of Education and the shift in emphasis to literacy, staff felt that the narrower focus would enable them to give the facilitators a more specifically defined role. Training could thus concentrate on equipping facilitators with a limited set of concrete skills and teaching techniques that would give them a firmer grasp on their job and increase their confidence. Furthermore, technical and problem posing content could be included in the literacy materials themselves, relieving the facilitator of the burden of having to act as a resource person for the participants and at the same time create their own curriculum, based on their analysis of needs in the community. The facilitators' area of technical expertise would be literacy training, and the literacy materials would carry many of the program's other content objectives.

At the same time, staff wanted to create a program design that would preserve the discussion and interaction that had characterized the nonformal education classes. A new ten-day training program was developed to coincide with the introduction of the literacy materials. Now that the program had moved to the Ministry of Education, most of the facilitators would be primary school teachers. The objectives of the training program were changed to acquaint the trainees with a revised facilitator's guidebook and to help them become familiar enough with the participatory classroom activities that they could use the materials and conduct the classes as intended.

The new training program began with introductory sessions on the nature of nonformal education and the role of the facilitator. The bulk of the course, though, focused on understanding the lesson plans and

practicing the different classroom activities. First the trainer modeled an activity so that the trainees could experience it. Then the trainees broke into small groups to study the directions for the activity in the guidebook. Finally, they took turns role playing the activity and commenting on one another's performance.

The training sessions used a "hands-on" approach to teaching the new skills. It modeled many of the nonformal techniques the facilitators were to use, such as small group work and a problem-posing approach to learning. The primary school teachers were excited about the methods and seemed to understand them. Although the training program was only long enough to cover the first of the four literacy books, project staff felt that once the facilitators understood and were able to use the participatory techniques they would be able to apply them to the rest of the course material.

The new training procedures proved to be much more focused and effective than anything which the project had previously tried, and the facilitators were able to use many of the techniques as intended. Part of this success was due to the fact that project staff was beginning to narrow down the facilitators' responsibilities and find an appropriate role for them to play. However, staff realized that the facilitator's job remained difficult because the guidebook itself remained too detailed and complicated.

At this point, staff began to revise the guidebook according to the four teaching methods described earlier in this chapter. A new training strategy was developed at the same time so that the guidebook and training were fully integrated. The guidebook was tested and revised during an actual training program and at the same time new training procedures were developed specifically to address the requirements of the guidebook. When staff found the trainees having difficulty understanding a concept or a teaching technique, they changed the guidebook accordingly, revising the language, simplifying directions and adding new material when necessary. Conversely, when staff found that the training activities did not produce the skills they felt the facilitators needed, they devised new training activities and tried them out. As a result, the guidebook itself doubled as a training manual. The guidebooks are used in the training program to teach the facilitators new skills and then taken back to the village to be used as a guide in conducting the classes.

## CHAPTER EIGHT

### IMPLEMENTATION AND EVALUATION

"Even if I just learn how to write my name, I will be happy."

- A learner in a Ministry  
of Education literacy class.

The implementation of the National Literacy Programme evolved over several years of field work with conscious reflection and planning between each step. A gradual expansion increased the number of learners served from a few thousand in the 1983-84 cycle to almost 100,000 in the 1988-89 cycle. The implementation has been managed not only by the Adult Education Section of the Ministry, but by other government agencies, integrated rural development projects, and international and Nepali NGOs as well. The Ministry and the other implementing agencies have experimented with different modes of implementation and this has led to innovative ways of providing effective literacy services.

The improvement of MOEC services came through constant evaluation of each element of the program. These evaluation activities were carried out by the Ministry and by the other implementing agencies and then shared so that the findings helped to improve all of the implementation. Some of this evaluation also looked at impact upon participants, both in terms of skill acquisition and in terms of changes in attitude. This chapter looks both at the implementation of the MOEC program and the evaluation of its elements and impact.

### IMPLEMENTATION

#### Multiple Channels

When work first began on the development of the National Literacy Programme, the Ministry turned to the experience of other agencies, both government and non-government. These lines of communication remained open after the Ministry was well along in the development of its own program. Once the materials were available, other agencies began expressing interest in using them either to replace their own materials or to begin new literacy efforts. Producing a few thousand more sets of materials or training a few more facilitators was easy for the Ministry.

Since the materials were inexpensive (due to the economies of large scale production) and the training was free, the Ministry literacy program was an easy element to add to an agency's efforts.

The literacy program proved successful for most of these groups. The people living in their areas of work found the program enjoyable and interesting, and the agencies found that the literacy activities formed a solid base on which to build other activities. The Ministry found these agencies to be an easy way to expand coverage with no added cost.

Most of the implementing agencies were NGOs such as Save the Children, Action Aid, Lutheran World Service, Redd Barna and the Women's Service Coordination Committee. Other agencies were working more closely with the government but operated somewhat like NGOs. These included UNICEF, SATA, the Small Farmer's Development Project, the Basic Services for Local Development Programme, the Women Development Programme, and others. Two agencies of the Ministry, the Women's Education Unit and the Nutrition Section, also used the materials.

The success of early collaboration with these other agencies influenced the Ministry's implementation policy as it expanded the literacy program. The Ministry began to see its role as the producer of materials and the trainer of trainers with only a limited responsibility for program implementation. In the 1988-89 cycle of classes, the Ministry was managing less than 40% of the literacy classes.

A few of the implementing agencies had used other literacy materials before the Ministry developed its package. Some of these agencies adopted the Ministry materials because they found them to be more appropriate and relevant to the needs of the participants in their program. Other agencies used the Ministry materials because they had none of their own and the Ministry materials were considered the best. Word of mouth was the major source of information dissemination about the materials.

Once they began using materials these agencies continued to use them and to expand their literacy programs. The basic philosophy and approach of the Ministry materials were supportive of the community development activities these groups were attempting to carry out. The materials helped the participants in these programs identify their needs and analyze their problems, and this formed a base on which to begin a rural development program.

Most of these groups adapted the Ministry program in some way to meet the needs of their own program. Some deemphasized parts of the materials while adding additional materials to provide more exposure to particular issues, like safe drinking water. The core elements of the program, though, remained intact.



### Modes of Implementation

The Ministry program was designed to be implemented through classes of 30 participants who would meet for two hours each evening, six days per week for six months. The six months was mandated by agricultural cycles as there are six months from the end of the harvest to the next planting season. One teacher was to be trained for each class and paid a modest sum for teaching. The books and the other materials needed for the class, including a blackboard and a lantern, were provided free. As implementation continued, the Ministry and other implementing agencies began to experiment with other modes of implementation.

The Ministry was concerned about increasing the participation of girls and women, both as learners and facilitators. Though women made up more than 70% of the illiterate population and girls were still not attending school at the same rate as boys, there were several impediments to their full participation in the program. Most of these were related to girls and women having to go some distance from their homes at night alone to a class. The Ministry tried a new mode of implementation that required less travel and found it to be quite successful.

Girls in the higher grades of secondary school were recruited and trained to be facilitators with their headmasters as supervisors. Each girl recruited six learners from near her house, usually illiterate members of her household. The same amount of facilitator salary for one person teaching 30 learners was divided between five girls, each teaching six learners. This mode of implementation provided a role model of an educated woman teaching other women while allowing more women into the program.

The Save the Children Federation (USA) experimented with asking the participants to help pay for the classes. Each learner was asked to pay a nominal registration fee, a tuition fee and a contribution toward the cost of the materials. SAVE also organized activities that supplemented the information in the Ministry materials. For example, SAVE arranged for demonstrations of improved seeds and cultivation techniques and organized community cleanup campaigns. SAVE also organized informal amateur "culture shows" by groups of classes to help generate a sense of a wider learning community. Both the fees and the activities acted as incentives to keep the learners attending class regularly, and the fee was partially refunded at completion of the classes.

Action Aid took the Ministry materials and, with the help of one of the Ministry trainers who had gone to work for them, modified the adult materials into a book of instruction for children. Much of the literacy and numeracy content remained the same, but the drawings and stories were changed to be more relevant to children. Now the Ministry as well as other groups have adopted these materials. The Ministry is making some minor changes in them and will soon begin mass production so that all the implementing agencies can benefit from Action Aid's work.

The Women's Service Coordinating Committee (WSSC) was interested in adapting the MOEC package to make it more interesting and relevant to women. They, too, experimented with modes of implementation. They found

that there were few literate women in rural villages who could teach, but women who had acquired their literacy in the MOEC classes lacked sufficient skill to teach. When they asked two recent graduates from a literacy class to team teach together, they found that this cooperation provided the confidence and shared skill to make a class a success. The WSCC also experimented with linking literacy classes to other development activities, including income generation activities and pre-school/day care centers.

These and many other innovations have been shared among implementing agencies and the Ministry informally and in formal coordination meetings that began in 1988. The Ministry has hosted several of these formal meetings each year, and the sharing of experience has led to changes in the Ministry program as well as in those of the other agencies.

## EVALUATION

Each agency using the Ministry materials and the Ministry itself employed some form of field evaluation as a way to judge effectiveness and to help improve the program. Most of this evaluation was informal and written reports do not exist. An education sector assessment completed by USAID in 1988 summarized this formative evaluation information and found that two elements where improvement could lead to a more effective program -- teachers and supervisors -- had been identified. Most respondents felt that the facilitators could benefit from more training and that inexperienced facilitators were less likely to follow the methodology or complete the course within six months. Supervision was seen as a key to program success.

### Impact Study

World Education and the Ministry worked with the WSCC to evaluate the impact of the program upon women participants. The study looked at 17 classes of thirty learners each in three of Nepal's 65 districts. A pre-test was administered to each participant who entered the class and a post-test was administered to each participant who completed the course of study. The tests measured reading skill, writing skill, math skill, math problem solving ability, and attitudes and knowledge concerning a number of practices considered important to development planners such as family planning, health practices, and erosion control.

The measures of change in attitude and knowledge were more likely related to the discussions that took place and to the reading material in the books that presented information and stories about these themes than to the acquisition of literacy or numeracy skills. The changes in attitude, therefore, could not be attributed to acquisition of literacy skills, but, rather, to the way in which those skills were taught.

The study was a straightforward attempt to assess changes in the literacy and numeracy skills of the participants and in their attitudes and knowledge in relation to certain practices. Because the program addressed these skills, knowledge, and attitudes in the curriculum, it was assumed that changes would occur as a result of participation in the program. Accordingly, a simple pre-test and post-test protocol was designed and administered to evaluate such changes.

The pre-test was administered to the 476 participants who began the course and the post-test was administered to the 210 participants who completed the course. All the participants were women, since the classes in the study were being run by the Women's Service Coordinating Committee (WSCC). Though the single sex nature of the sample made it impossible to infer anything about male participants, the same impact would probably occur with men.

Some of the groups that implement the literacy program have personnel and financial resources available to their efforts that can not be matched by the Ministry of Education or by other local agencies. The program run in these three sites modeled the Ministry program so as to assess the impact when the program is implemented with the minimum necessary resources. Though the participant and teacher selection, teacher training, materials, methods of instruction, and supervision system were all the same as the government program, the program administrators from the WSCC may have had a higher motivation to do their job well than a government worker. In addition, the WSCC administrators could focus all of their attention on this effort, while government officials must focus on a large number of educational programs. Still, the assessment does give a picture of impact when the program is implemented according to plan.

The sample, though small, was reasonably representative of the female population in the country. Random sample research in Nepal is made extremely difficult by the terrain. One study in nutrition in 1975 had to spend almost \$500,000 on transportation alone to achieve a random sample. Because of the terrain, research projects in Nepal usually use three sites, one in the lowlands called the Tarai, one in the lower hill region, and one in the higher mountain region. This provides a sample that reflects the ethnic, linguistic and ecological differences of the country. That procedure was followed in this study. Bhojpur District was the site in the high mountains; Morang District was the site in the Tarai; and Lalitpur District was the site in the lower hill region.

The villages within each district were chosen by the WSCC's local affiliates which were given instructions that the villages should meet minimum standards of reasonable accessibility, large illiterate population, sufficient number of literate persons to act as teachers, and supportive leadership in the village. There is no indication that this selection process produced participants who would be more successful than the average rural village.

There are several important flaws in the study design. Only 210 of the 476 pre-test participants were post-tested. We do not know, therefore, what the true change in skill level, knowledge or attitude was. In addition many of the classes were pre-tested after instruction began and this produced much higher pre-test scores. There are aspects of the data

that indicate that neither of these flaws place the findings in doubt. Each District had classes that were pre-tested before instruction began and participants in these classes had very low pre-test scores. The post-test scores from these classes were similar to the others. Each District also had classes with drop-out rates that were low (25-32%) and they, too, had post-test scores that were similar to the other classes.

Another flaw was the lack of a control group. In theory, the effects measured here could have been caused by other factors. But the assessment sites were isolated and received only minimum services from the government. The assessment staff would have been aware of any other program focused on the skills and attitudes measured, and, therefore, the study team was confident that literacy and numeracy skills acquisition was caused by this program. There were other sources of information, in particular radio and extension agents, that could have affected knowledge and attitudes. Still the changes are dramatic enough that any program with that power to effect change would have come to the attention of the study team.

### Findings from the Impact Study

The data is presented by District and summarized for all sites. For the four skill tests, the mean scores for both pre-test and post-test are presented. The raw score and the score as a percentage of the total possible is presented. For the attitude and knowledge change questions, the percentage of participants stating an answer is presented.

Of a total of 476 participants who began the program, 210 completed the course. This produced a drop-out rate of 55.88%. 17.6% of classes failed completely. Of the remaining classes, the drop-out range was 25.87% to 76.67%. When the three classes that failed completely are removed, the drop-out rate is significantly lower. Project staff stated that the key element in class failure was the attitude of the teacher. Classes failed when the teacher did not bother to show up or when the teacher treated the students as if they were children, rather than adults. Improved teacher selection, therefore, could decrease the per completing student cost significantly with little added expense. In addition, employing successful teachers to teach more classes would be more effective than hiring new teachers. The findings on drop-out rates were as follows:

|           | <u>DROP-OUT RATE</u> |           |          |            |
|-----------|----------------------|-----------|----------|------------|
|           | PRE-TEST             | POST-TEST | DROP-OUT | % DROP-OUT |
| BHOJPUR   | 185                  | 93        | 92       | 49.73      |
| MORANG    | 156                  | 59        | 97       | 62.18      |
| LALITPUR  | 135                  | 58        | 77       | 57.04      |
| ALL SITES | 476                  | 210       | 206      | 55.88      |

The reading test was divided into four aspects: letters, words, sentences and a reading passage. The first measured letter recognition. The others measured ability to read words, sentences and a full paragraph. Each of the first three had four questions each for a total of 12 points. The reading passage was graded 0 to 3 where 0 was no ability to read and 3 was able to read well. Thus, a perfect score was 15. The pre-test range of scores, by class, was 0 to 7.31; and of post-test scores was 11.95 - 14.44. A composite of all sites shows a pre-test of 2.76 and a post-test of 13.29 which is a significant positive effect. The following chart presents the findings:

CHANGE IN  
READING STATUS  
(15 = 100%)

|           | PRE-TEST MEAN |       | POST-TEST MEAN |       |
|-----------|---------------|-------|----------------|-------|
|           | SCORE         | %     | SCORE          | %     |
| BHOJPUR   | 2.44          | 16.27 | 13.48          | 89.87 |
| MORANG    | 2.71          | 18.07 | 13.12          | 87.47 |
| LALITPUR  | 3.26          | 21.73 | 13.17          | 87.80 |
| ALL SITES | 2.76          | 18.41 | 13.29          | 88.62 |

The writing test had two parts. In the first part, participants were asked to write their name, age, address and nationality. In the second part, they were given an oral dictation and asked to write down what they heard. Each part was graded 0 to 4 for a total score of 8. The pre-test range, by class, was 0 to 3.29; and the post-test range was 3.93 - 7.26. A composite of all sites shows a pre-test of 1.01 and a post-test of 6.04 which is a significant positive change. The findings are presented below:

CHANGE IN  
WRITING STATUS  
(8 = 100%)

|           | PRE-TEST MEAN |       | POST-TEST MEAN |       |
|-----------|---------------|-------|----------------|-------|
|           | SCORE         | %     | SCORE          | %     |
| BHOJPUR   | .44           | 7.63  | 6.35           | 79.38 |
| MORANG    | 1.83          | 22.88 | 5.98           | 74.75 |
| LALITPUR  | 0.50          | 6.25  | 5.60           | 70.00 |
| ALL SITES | 1.01          | 12.62 | 6.04           | 75.49 |



The numeracy skill test had two parts. The first part tested ability to identify numbers of one, two and three digits. The second part measured ability to transform words into numbers. This part also had one, two and three digit numbers. The first part was graded at 9 points and the second at 3 for a total of 12. The range, by class, was 0 to 8.21 for the pre-test and 7.04 to 10.86 for the post-test. A composite of all sites shows a pre-test of 1.46 and a post-test of 8.92 which is a significant positive change. The findings are presented below:

CHANGE IN  
NUMERACY STATUS  
(12 = 100%)

|           | PRE-TEST MEAN |       | POST-TEST MEAN |       |
|-----------|---------------|-------|----------------|-------|
|           | SCORE         | %     | SCORE          | %     |
| BHOJPUR   | .90           | 7.50  | 8.25           | 68.75 |
| MORANG    | 2.14          | 17.83 | 9.95           | 82.92 |
| LALITPUR  | 1.43          | 11.92 | 8.93           | 74.42 |
| ALL SITES | 1.46          | 12.14 | 8.92           | 74.30 |

The mathematical problem solving test had five parts, each with four questions. The five parts included addition, subtraction, multiplication, division and oral problems. Each question was worth one point for a total of 20. The range, by class, for the pre-test was 1.29 to 7.36. The range for the post-test was 8.15 to 17.43. A composite of all sites shows a pre-test of 2.82 and a post-test of 12.80 which is a significant positive change. The findings are presented below:

CHANGE IN  
MATHEMATICAL PROBLEM SOLVING STATUS  
(20 = 100%)

|           | PRE-TEST MEAN |       | POST-TEST MEAN |       |
|-----------|---------------|-------|----------------|-------|
|           | SCORE         | %     | SCORE          | %     |
| BHOJPUR   | 1.94          | 9.70  | 11.40          | 57.00 |
| MORANG    | 3.41          | 17.05 | 14.56          | 72.80 |
| LALITPUR  | 3.34          | 16.70 | 13.26          | 66.30 |
| ALL SITES | 2.82          | 14.09 | 12.80          | 64.01 |

The test of changes in knowledge and attitude consisted of questions asked of participants about each subject. The participants were free to give any answer. The answers were compiled and the pre-test and post-test percentages of people who expressed each answer were computed. In this paper, the findings from four of the questions are presented. Only the pre-test and post-test results for the answer deemed "most correct" is presented.

Diarrheal disease is the most common cause of infant mortality in Nepal. To combat this problem, His Majesty's Government has made every effort to provide training in oral rehydration therapy and to make oral rehydration salts available in rural areas. The most correct response to the question, "What would you do if your child had diarrhea?" was oral rehydration therapy or an answer that implied that knowledge. A composite of all sites shows a pre-test of 5.04% and a post-test of 90.74% which is a significant positive change. The results were as follows:

Percentage of Participants Suggesting  
Oral Rehydration Therapy for  
Children's Diarrhea

|           | PRE-TEST<br>% | POST-TEST<br>% |
|-----------|---------------|----------------|
| BHOJPUR   | 6.45          | 90.32          |
| MORANG    | 0.90          | 84.05          |
| LALITPUR  | 7.89          | 98.21          |
| ALL SITES | 5.04          | 90.74          |

Forest conservation is of critical importance in Nepal. Valuable forest cover has been lost and this is causing erosion. The erosion is decreasing the amount of farm land and destroying the capacity of hydro-electric dams. This problem can only be solved with help from the grassroots level. The best answer to the question, "What should be done to stop soil erosion?" was tree planting. A composite of all sites shows a pre-test of 26.60% and a post-test of 94.63% which is a significant positive change. The results are as follows:

Percentage of Participants Suggesting  
Tree Planting as a Means to  
Control Floods and Landslides

|           | PRE-TEST | POST-TEST |
|-----------|----------|-----------|
| BHOJPUR   | 34.41    | 96.77     |
| MORANG    | 0.90     | 92.75     |
| LALITPUR  | 45.61    | 93.10     |
| ALL SITES | 26.60    | 94.63     |

Overpopulation is another critical problem in Nepal. The resources available to support a population -- land, water, employment and social services -- are limited, yet the population is increasing at more than a 2% rate. Before people will begin to think about planning their families, they must make a decision about the limitations a large family puts on the ability of parents to provide for their children. The best answer to the question, "What are the consequences of having many children?" is that it is difficult to raise and feed them. A composite of all sites shows a pre-test of 51.18% and a post-test of 88.98% which is a significant positive change. The results from this question were as follows:

Percentage of Participants Suggesting  
that Having too Many Children Makes it  
Difficult to Raise and Feed Children

|           | PRE-TEST | POST-TEST |
|-----------|----------|-----------|
| BHOJPUR   | 56.99    | 84.94     |
| MORANG    | 61.26    | 91.30     |
| LALITPUR  | 31.58    | 93.10     |
| ALL SITES | 51.18    | 88.98     |

Another contributing factor in infant mortality is low birth weight. Mothers who smoke tobacco while pregnant harm not only themselves but their unborn infants. Women who smoke have babies with lower birth weights than women who do not. Participants were asked what proscriptive measures they would give to pregnant women. The correct answer was avoid smoking. A composite of all sites shows a pre-test of 3.45% and a post-test of 82% which is a significant positive change. The following are the results:

Percentage of Participants Mentioning Avoiding Smoking as a  
Proscriptive Measure for Pregnant Women

|           | PRE-TEST | POST-TEST |
|-----------|----------|-----------|
| BHOJPUR   | 0        | 71.0      |
| MORANG    | 10.53    | 84.48     |
| LALITPUR  | 0        | 97.10     |
| ALL SITES | 3.45     | 82.0      |

Analysis

The design of this study does have flaws that dilute the power of the conclusions that can be drawn. Yet the picture presented by these findings could reasonably be expected to occur with female classes run under this method. There is no reason to believe that if classes of males had also been sampled that the findings would be radically different. Standard deviation and t-scores were computed for a sample of the classes. The standard deviation measures decreased from pre-test to post-test reflecting that the wide variability of the reading capability among participants decreased as a result of the class. This indicates that the change in skill level and the change in attitude and knowledge were a result of the literacy class. The t-values show significance at the .05 level indicating that the changes that occurred were significant changes.

The study showed that the classes were being effective for around 45% of the initial participants. When the total cost for operating the Adult Education section and its 40% portion of the literacy program, the cost per completing student was approximately \$20. Since the Ministry sees completion of the course to be equivalent to the first three grades of primary school, the literary classes are providing an inexpensive alternative for adults who never attended school.

## CHAPTER NINE

### EPILOGUE

"Look at these three sisters! Their father is only a peon. How could they go to school? This is a chance for them to learn!"

- A woman in a Ministry of Education literacy class referring to three young girls in the class.

In 1988, the Ministry of Education decided that the National Literacy Programme was a proven success, but the Ministry acknowledged that serving 100,000 learners each year was not going to end illiteracy in Nepal. The Ministry formed a task force to look into the possibility of launching a National Literacy Campaign that would serve as many participants as possible. The task force asked the Ministry to ensure that the factors that led to the success of the literacy program were incorporated into the campaign.

#### Planning

The task force understood that much of the success of the literacy program came from taking the time to plan and experiment, and they were committed from the beginning to using the same approach in developing the national campaign. The task force proposed a three phase expansion of the program into a campaign with the first phase taking place during the 1988-89 cycle. This pilot effort would attempt to serve all illiterate people in one small area of the country and would provide a way to look at the issues of mass mobilization on a small scale while taking another look at the other elements of the program to see what alteration might be necessary for use on a larger scale.

The second phase would take place during the 1989-90 cycle. At this time the plan generated out of the previous pilot would be tried out in an intensive way in five different sites spread throughout the country. During these first two phases the regular program would continue at its previous level of around 100,000 per year.

The third phase would begin during the 1990-91 cycle and continue to the end of the century. The plan for this phase would come out of the experience of the previous phase and would begin operation at several hundred thousand participants each year and expand to more than a million each year by the middle of the decade. During this final push for



literacy, every agency in Nepal would be urged to participate with either the Ministry campaign materials, the previous materials of the program or their own materials. Since the primary school system would be expanding at the same time, the Ministry hoped that Nepal could reach the Asian standard for literacy (65% to 75% literacy) by the year 2000.

The first phase is in progress as this monograph is being completed. The pilot is taking place in the District of Surkhet in and around the District Headquarters, Birendra Nager. A survey of the area estimated that 13,100 adults and children (ages 8 to 45 years) were illiterate and not attending school. The pilot effort was planned to serve approximately 9,000 of these people at a cost of approximately \$10US per participant. The funds for the effort came from the Ministry of Education, USAID, and UNICEF.

### The Target Group

The task force decided that the campaign should target all illiterate children and adults between the ages of 8 and 45 who are not in school. This targeting did not exclude people over the age of 45, but even with these limits the population to be served was between 8 and 10 million people. In targeting children, the Government was acknowledging that the primary schools were not serving all children in the Kingdom, and that many of the children who enter primary school drop out in the first three years (almost 70% in 1988) before they acquire strong literacy skills.

One factor that the Ministry is looking at during the planning phase is which segments of the target group should receive priority. The goal of this prioritizing is to successfully serve the largest number of people with the available resources. Qualities of the learner such as age, motivation, sex, proximity to urban or semi-urban areas, marital status, and previous experience with education will be studied to produce a profile of the most successful students, and the program will be designed to ensure that these people enter the program at its early stages. This will provide a greater possibility of success when the campaign is young and still suffering from inexperience. In addition, some of these early learners might become teachers later in the decade. Though school age children might fall into the priority category, special emphasis will be given to children who are not being served by the primary school system.

### The Materials

The Naya Goreto materials developed by the MOEC for the National Literacy Programme are to be the basis for the adult program, but the Task Force felt that these materials needed to be tried out in an intensive campaign to see if they are appropriate. The questions that have arisen were in regard to the resources needed to make this package work. They require six months of instruction, 400 pages of materials and associated games and posters. The method also requires training and follow up to change the traditional manner of teaching. The task force wondered how

much quality they would give up if they saved some money by simplifying the training and materials and shortening the program to four months. These factors will be looked at during the planning phase.

The children's literacy materials developed by Action Aid were added to the campaign plan along with the teacher training designed for them. The Ministry did make some modifications of these materials, but these modifications were minor. The classes to be run with these materials would be for children 8 to 14.

### Facilitator Selection and Training

Earlier research and experience has shown that the key to success is a facilitator who is motivated to come to class and do a good job. A major element of the cost of the program is the facilitator's compensation and training. Any savings in this area will allow the campaign to serve more people, but those savings can not be at the cost of good facilitators.

The pilot effort is attempting to recruit facilitators who are members of the communities they serve. People who are educated but who are not employed in the modern sector and who live in the areas they serve require slightly less compensation than trained teachers from the formal school system. Ways to identify which of these individuals can do the job well and how to use the campaign to sustain their motivation are key elements that could lead to success.

Ways to lessen the cost of training while increasing its effectiveness will be hard to find, but the planning phase will make every effort to discover them. Since training for the children's program and the adult program are somewhat similar, having one facilitator teach an adult and a child class each day at different times could lead to less time in training. Using teachers for more than one cycle of literacy campaign would require less training for the second year, but some training would improve effectiveness. These and other elements of the facilitator selection and training will be looked at closely.

### Implementation

The Task Force decided that the Campaign should build on the effective elements of the program implementation. The participation of all of the cooperating agencies would be requested and each would be encouraged to expand their efforts and take responsibility for making all people within their geographic areas literate by the end of the century. Agencies that have not been involved in literacy will be encouraged and helped to add literacy work to their program.

The Task Force also decided that the Ministry would need assistance in carrying out its own part of the campaign and the help of the Nepal Women's Organization and the Nepal Elder's Organization were enlisted to provide that help. Both of these are class organizations with membership in all

the towns and villages of Nepal. Schools, local government officials and all other agencies working at the local level would be requested to participate as well.

### Post-Literacy

The National Literacy Programme had just begun developing a post-literacy program when the planning for a Campaign began. The Ministry and several of the collaborating agencies have produced post-literacy reading materials and several have follow-up activities that link the new reading and writing skills with activities that increase family income, improve agricultural productivity or change health and family planning practices. Along with the production of materials, ways of managing distribution through local libraries, wall newspapers, and reading centers have been tried.

The Ministry, UNICEF and World Education are experimenting during the pilot in Surkhet with different types of materials and activities that will follow up on the gains made during the campaign.

### Conclusions

This monograph has presented a case study from which other literacy program designers can learn much about how to do their jobs. Key among this learning is the process used to design the program and later the large scale campaign. In this process, the ideal program, from the point of view of both pedagogy and national policy, was tried out in a real situation. The experience of this try out was analyzed and the program was changed to become more effective. The criteria used to judge effectiveness included impact on learners but also included the policy issues of cost, national priorities, and ease of implementation.

This process allowed for the time and resources needed to produce a package of materials and training that attracted the interest of other development agencies. These agencies have added greatly to the resources available for implementation of the literacy program and campaign and have contributed to the design process as well.

There is much else that could be brought into a conclusions section about how to design and implement a literacy program, but the other positive elements of the Nepal program came out of the process. This monograph, therefore, will conclude by urging the readers to learn from this experience that to develop a successful literacy effort, a commitment to learning from reality is essential. Theory, philosophy and policy can inform the process, but it is the process itself that leads to success.